

sasc021e_N (downstream)



sasc021e_S (upstream)



sasc021e_W (across)

Waterbody Date	a Sileet										
Description											
Project Name:						Date:			Waterbody	/ Survey ID:	
Line 5 Relocation Pro	ject					2019-09-25			sasc023e		
State:		County/F	Parish:			USGS Water	body Name	:			
WI		Ashland				UNT to Billy	Creek				
Company:		Crew Me	mber Initi	als:		Latitude:			Longitude:	<u> </u>	
Enbridge		BRG/JSV	N			46.388751			-90.760201	1	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Rou	te		Access Road	□Facility	□Other			
Waterbody Type:	☐ River	[✓ Stream			Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	✓ No Wat	ter I	□ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum 🗆	□Algal Mats	□Other
Existing Condition ^a :	□ Highly	Functiona	al Stream	☑ Mod	erately	y Functional S		☐ Functionally	Impaired St	ream	
Feature Description: (check one)	✓ Natural	[□ Artificia	l, man-made	. 🗆	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Intermit	tent		Perennial	☐ Connec Swale	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t I	☑ Meande	ering			<u> </u>				
Description Notes: The feature is a small collecting feature.	erosional s	stream tha	at leads in	to perennial	strear	m feature sasc	022p. The fe	eature starts at	the base of	a hill as a see	ep/runoff
Measurements											
Depth of Water:	ft.	N/A ✓	Unknow	n□ Water	Edge	e to Water Ed	ge: ft.	N/A 🗹	OHWM Wid	dth: <u>2</u> ff	i.
OHWM Indicator:	□ CI	ear line o	n bank	□Shelving		□Wrested ve	egetation	☑ Scouring		□Waters	staining
(check all that apply)		nt, matted	,	□Wrack lin	ie	□Litter and o	lebris	□Abrupt plan	t community	y □Soil cha change	aracteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Bou	lder 🗹	Cobb	ole □ G	ravel	☑ Sand	☐ Silt/ cl	lay 🗆 (Organic
Observations											
Riparian Zone Preser (check one)	nt: 🗆 Ye	es	V N	lo							
Vegetation Layers: (check all that apply)	☑ Tr	ees	□S	aplings/Shru	ıbs	☐ Herbs					
Dominant Bank Vege Thuja occidentalis, Be	etation (list etula allegh): aniensis,	Tilia amer	icana. Unde	rstory	vegetation is	very sparse	due to disturbar	nce of the la	andscape.	
Aquatic Habitats (ex: None.	submerged or	emerged aqı	uatic vegetation	on, overhanging	banks/r	oots, leaf packs, la	rge submerged v	vood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Runoff from uphill pay	stock access red road, ru	s, manure i inoff from	n waterbod sparsely	y, waste disch vegetated slo	arge pi ope, h	ipes): ieavy worm ac	tivity.				
Observation Notes: The feature is highly e	erosional di	ue to distu	urbance to	the surroun	ding la	andscape and	increased ru	inoff.			



sasc023e_N (downstream)



sasc023e_S (upstream)



sasc023e_W (across)

Tratorboay Bat	4 011000													
Description														
Project Name:						Date	:			1	Waterbody	Survey	ID:	
Line 5 Relocation Pro	ect					2019	9-09-25				sasc024e			
State:		County	/Parish:			USG	S Wate	rbody Name	9:	L				
WI		Ashland	d			UNT	to Billy	Creek						
Company:		Crew M	lember Ini	tials:		Latit	ude:				Longitude:			
Enbridge		BRG/JS	SW			46.3	89523				-90.759793			
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Ro	ute		Acces	s Road	□Facility		Other				
Waterbody Type:	□ River		☐ Strean	n		Ditch		☐ Swale		Canal		Other		
Water Appearance: (check one)	☐ No Wat	ter	☐ Clear			T urbid		☐Sheen or	n 🗆	Surface	e Scum 🗆	Algal N	∕lats □	Other
Existing Condition ^a : (check one)	□ Highly	Function	nal Stream	n 🗆	Moderate	ely Fund	ctional S	Surface Stream	⊈ Functi	onally I	mpaired Str	eam		
Feature Description: (check one)	☐ Natural		✓ Artificia	al, man-	made [□ Manip	ulated							
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perer	nial	☐ Connection Connection	cting					
Sinuosity within Survey Corridor: (check one)	☑ Straigh	t	☐ Meand	dering										
Description Notes: The feature is a small perennial waterbody s		litch. Th	e banks ar	e thickly	/ vegetate	d with a	ı small r	iparian fringe	e, and so	me wat	er runs from	the fea	ature dow	n into
Measurements														
Depth of Water: 0.1	ft.	N/A□	Unknov	wn□	Water Ed	ge to W	ater Ed	l ge: 1 ft.	:. N	N/A□	OHWM Wid	th:	<u>2</u> ft.	
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	□She	elving	□Wı	ested v	egetation	□Scot	ıring		□W	/ater stain	ing
(спеск ан тасарру)		nt, matte		□Wra	ack line	□Lit	ter and	debris	□Abru change		t community	□S cha	oil charact	teristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	□ Cot	oble		Gravel	☑ San	d	☐ Silt/ cla	ny	□ Orga	anic
Observations														
Riparian Zone Preser	nt: 🗆 Ye	es	V	No										
Vegetation Layers: (check all that apply)	□ Tr	ees		Saplings	s/Shrubs	Į.	1 Herbs							
Dominant Bank Vege Phalaris arundinacea	tation (list Scirpus cy): /perinus	, Juncus e	ffusus, F	Rumex cri	spus.								
Aquatic Habitats (ex: Overhanging vegetati	submerged or On.	emerged a	aquatic vegeta	tion, overh	nanging bank	s/roots, lea	af packs, l	arge submerged v	wood, riffles	s, deep po	ools, etc.):			
Aquatic Organisms (None.	Observed ((list):												
Disturbances (ex: live Runoff from paved roa	stock access ad.	s, manure	e in waterbo	dy, waste	e discharge	pipes):								
Observation Notes: The water has very lit	tle flow, an	d as suc	ch provides	s some a	aquatic ha	abitat. Ti	ne featu	ire collects st	tormwate	er runoff	f.			



sasc024e_E (upstream)



sasc024e_N (across)



sasc024e_W (downstream)

Trate: Deay Bate	0000										
Description											
Project Name:						Date:			Waterbody St	ırvey ID:	
Line 5 Relocation Proje	ect					2019-09-25			sasc026e		
State:		County/P	arish:			USGS Wate	rbody Name	9 :			
WI		Ashland				UNT to Billy	Creek				
Company:		Crew Mei	mber Initi	ials:		Latitude:			Longitude:		
Enbridge		BRG/JSV	V			46.388894			-90.766694		
Survey Type: (check one)	☑ Centerl	ine [☐ Re-Rou	ıte	$\Box A$	Access Road	□Facility	□Other			
,	☐ River	[☑ Stream	l		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	☐ No Wat	ter (☑ Clear		□٦	Γurbid	☐Sheen o Surface	n □Surfac	e Scum 🗆 Al	gal Mats	□Other
Existing Condition ^a : (check one)	☑ Highly		l Stream	□ Mod	erately	y Functional S		☐ Functionally	Impaired Strea	m	
Feature Description: (check one)				ll, man-made		Manipulated					
Flow Regime: (check one)	☑ Ephem	eral [☐ Intermi	ttent		Perennial	☐ Connection Swale	cting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	t [☑ Meand	ering							
Measurements											
Depth of Water: 0.1	_ ft.	N/A□	Unknow	_{/n□} Wate	r Edge	to Water Ed	ge : <u>0.5</u> ft	N/A□	OHWM Width	: <u>2</u> ft.	
OHWM Indicator: (check all that apply)	□ CI	ear line or	n bank	□Shelving		□Wrested v	egetation	 Scouring		□Water st	taining
(спеск ан так арргу)		nt, matted		□Wrack lin	ne	□Litter and	debris	□Abrupt plan change	t community	□Soil cha	racteristic
Dominant Substrate: (check all that apply)		edrock	□ Bou	ılder 🗆	Cobb	le 🗆 (Gravel	□ Sand	☑ Silt/ clay		rganic
Observations											
Riparian Zone Presen	t: 🗹 Ye	es		lo							
Vegetation Layers: (check all that apply)	☑ Tr	ees	v s	Saplings/Shr	ubs	✓ Herbs					
Dominant Bank Veger Impatiens capensis, So	tation (list cirpus cyp): erinus, Sc	irpus hatt	orianus, Gly	ceria s	striata, Fraxin	us nigra, Ace	er nigra, Typha	X glauca.		
Aquatic Habitats (ex: s Overhanging vegetation	ubmerged or on.	emerged aqu	uatic vegetati	on, overhanging	banks/r	oots, leaf packs, la	arge submerged	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms O None.	bserved ((list):									
Disturbances (ex: lives None.	stock access	s, manure ir	n waterbod	ly, waste disch	narge pi	ipes):					
Observation Notes: The stream is somewh sometimes feeds it wa		al, althouţ	gh the dei	nse bank ve	getatio	on reduces ere	osion. The lo	w elevation of the	he stream mea	ns that the	wetland



sasc026e_E (across)



sasc026e_N (downstream)



sasc026e_S (upstream)

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbod	ly Survey ID:	
Line 5 Relocation Pro	ject					2019-09-25			sasc028e		
State:		County/	Parish:			USGS Wate	rbody Name):			
WI		Ashland	I			UNT to Billy	Creek				
Company:		Crew Mo	ember Ini	tials:		Latitude:			Longitude	9 :	
Enbridge		BRG/JS	SW			46.388681			-90.76758	35	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	☐ River		☐ Stream	n	V	Ditch	☐ Swale	☐ Canal		☐ Other	
Water Appearance: (check one)	✓ No War	ter	☐ Clear			Turbid	□Sheen or Surface	n □Surfac	e Scum	□Algal Mats	□Other
Existing Condition a: (check one)	□ Highly	Function	nal Stream		Moderatel	y Functional S		Functionally	Impaired S	Stream	
Feature Description: (check one)	☐ Natural		✓ Artificia	al, man-n	nade 🗆	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connec	ting			
Sinuosity within Survey Corridor: (check one)	☑ Straigh	t	☐ Meand	dering							
Description Notes: The feature is a ditch	adjacent to	a grave	l road.								
Measurements											
Depth of Water:	ft.	N/A 🗹	Unknov	wn□ V	Vater Edge	e to Water Ed	lge: ft.	N/A 🗹	онwм w	idth: 2	ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	□Shel	lving	□Wrested v	egetation	✓ Scouring		□Wate	r staining
		nt, matte		□Wra	ck line	□Litter and	debris	□Abrupt plan change	t communi	ty □Soil c change	characteristic
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	□ Cobb	ole 🗆 (Gravel	□ Sand	☑ Silt/ o	clay [∃ Organic
Observations											
Riparian Zone Prese	nt: 🗆 Ye	es	V 1	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/	/Shrubs	✓ Herbs					
Dominant Bank Vege Acer rubrum, Tilia am	etation <i>(list</i> ericana, Ul): mus ame	ericana, Fr	raxinus p	ennsylvan	ica, Cornus s	ericea, Acer	saccharum, Poa	a pratensis	s, Dactylis glo	omerata.
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overha	anging banks/r	roots, leaf packs, l	arge submerged v	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Runoff from gravel ro		s, manure	in waterboo	dy, waste	discharge p	ipes):					
Observation Notes: The feature is somew	hat eroded	, and is o	directly adj	jacent to	a treeline	and barbed v	rire fence.				



sasc028e_E (across)



sasc028e_N (downstream)



sasc028e_S (upstream)

Trate: Beay Bat	<u>u 01100t</u>									
Description										
Project Name:						Date:			Waterbody St	urvey ID:
Line 5 Relocation Pro	ject					2019-09-25			sasc027e	
State:		County/	/Parish:			USGS Wate	erbody Name) :		
WI		Ashland	d			UNT to Billy	Creek			
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		BRG/JS	SW			46.388531			-90.766978	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ River		☑ Strean	n		Ditch	☐ Swale	☐ Cana	I 🗆 C	Other
Water Appearance: (check one)	✓ No War	ter	☐ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum	lgal Mats □Other
Existing Condition a: (check one)	□ Highly	Function	nal Stream		Moderatel (y Functional :		☐ Functionally	Impaired Strea	ım
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-		Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm			Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	✓ Meano	dering						
Measurements										
Depth of Water:	ft.	N/A 🗹	Unknov	wn 🗆 🛚 🕦	Water Edge	e to Water Ed	ige: ft.	. N/A	OHWM Width	: <u>1</u> ft.
OHWM Indicator:	□ CI	ear line	on bank	□She	elving	□Wrested v	egetation	☑ Scouring		□Water staining
(check all that apply)		nt, matte ing vege		□Wra	ack line	□Litter and	debris	□Abrupt plar	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☐ Cobb	ole 🗆 (Gravel	☐ Sand	 Silt/ clay	☐ Organic
Observations										
Riparian Zone Preser	nt: 🗆 Ye	es		No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	s/Shrubs	✓ Herbs	;			
Dominant Bank Vege Acer saccharum, Ulm										
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overh	anging banks/i	roots, leaf packs, l	arge submerged v	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live Runoff from sparsely	stock acces vegetated	s, manure wooded	in waterbooslopes.	dy, waste	e discharge p	oipes):				
Observation Notes: The feature is somew	hat erosior	nal in nat	cure, and th	he bank	s are spars	ely vegetated	. Waterbody	flows into sasc	026e.	



sasc027e_E (downstream)



sasc027e_N (across)



sasc027e_W (upstream)

Waterbody Data Sil	CCL							
Description								
Project Name:				Date:			Waterbody S	urvey ID:
Line 5 Relocation Project				2019-09-26			sasc029e	
State:	County	/Parish:		USGS Wate	rbody Name	•		
WI	Ashland	d		None				
Company:	Crew M	lember Initial	s:	Latitude:			Longitude:	
Enbridge	BRG/JS	SW		46.327704			-90.681782	
Survey Type:	enterline	☐ Re-Route		Access Road	□Facility	□Other		
Waterbody Type: ☐ Ri	ver	☐ Stream	ď	Ditch	☐ Swale	☐ Canal		Other
Water Appearance:	Water	☐ Clear		Turbid	✓Sheen on Surface	□Surfac	e Scum □A	lgal Mats □Other
	ighly Function	nal Stream	☐ Moderatel	y Functional S		Functionally	Impaired Strea	am
Feature Description: ☐ Na (check one)	atural	☑ Artificial, r	man-made 🗆	Manipulated				
Flow Regime:	hemeral	☐ Intermitte	nt 🗆	Perennial	☐ Connect	ting		
Sinuosity within Survey Corridor:	raight	☐ Meanderi	ng					
The feature is a small roads	side ditori ass	ociated with w	velianu wascu4t	Je.				
Measurements								
Depth of Water: 0.1 ft.	N/A□	Unknown	□ Water Edge	e to Water Ed	ge: <u>0.5</u> ft.	N/A□	OHWM Width	1: 1ft.
OHWM Indicator: (check all that apply)	☐ Clear line	on bank 🗆	Shelving	□Wrested v	egetation	☑ Scouring		□Water staining
	☑Bent, matt missing vege		□Wrack line	□Litter and o	debris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Bedrock	☐ Boulde	er □ Cobb	ole 🗆 G	Gravel	☑ Sand	□ Silt/ clay	□ Organic
Observations								
	□ Yes	☑ No						
Vegetation Layers: (check all that apply)	☐ Trees	□ Sap	olings/Shrubs	☑ Herbs				
Dominant Bank Vegetation Sagittaria latifolia, Calamag	າ (list): rostis canade	ensis, Scirpus	cyperinus.					
Aquatic Habitats (ex: submered Overhanging vegetation.	-	aquatic vegetation,	overhanging banks/r	roots, leaf packs, la	rge submerged w	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms Obser None.	ved (list):							
Disturbances (ex: livestock a Polluted runoff, runoff from	access, manure gravel road a	e in waterbody, v ind mowed fie	waste discharge p ld.	ipes):				
Observation Notes: The stream receives runoff	from the adja	acent gravel ro	oad, and only ex	ists due to the	roadside loc	ation.		



sasc029e_E (downstream)



sasc029e_S (across)



sasc029e_W (upstream)

Trate: Beay Bat	4 011000									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Pro	ject					2019-10-02			sasc030i	
State:		County/	Parish:			USGS Wate	rbody Name	:		
WI		Ashland	I			None				
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		BRG/JS	SW .			46.408530			-90.555050	
Survey Type: (check one)	☐ Centerl	ine	☐ Re-Ro	ute	V A	ccess Road	□Facility	□Other		
Waterbody Type: (check one)	☐ River		☑ Strean	n		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☐ No Wa	ter	✓ Clear		□T	urbid	☐Sheen or Surface	ı □Surfac	e Scum □Al	gal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	al Stream	I Mo	oderately	Functional S		☐ Functionally	Impaired Strea	m
Feature Description: (check one)	✓ Natural			al, man-ma	de 🗆 N	Manipulated				
Flow Regime: (check one)	□ Ephem	eral	✓ Interm	ittent	□ F	Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Mean	dering						
The feature is a small created by a beaver d		at runs fr	om a youn	ig forest un	der a diri	t road via a ci	ulvert. The fe	ature then flow	s into an open	waterbody that was
Measurements										
Depth of Water: 0.4	ft.	N/A□	Unknov	wn□ Wat	ter Edge	to Water Ed	ge: <u>3</u> ft.	N/A□	OHWM Width	: <u>3</u> ft.
OHWM Indicator:	□ Cl	ear line	on bank	□Shelvir	ng	□Wrested v	egetation	 Scouring		□Water staining
(check all that apply)		nt, matte ing vege		□Wrack	line	□Litter and	debris	□Abrupt plan	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	□ Cobbl	le 🗆 C	Gravel	□ Sand	坚 Silt/ clay	□ Organic
Observations										
Riparian Zone Preser	nt: 🗆 Ye	es	V	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/Sl	nrubs	✓ Herbs				
Dominant Bank Vege Acer rubrum, Populus	etation (list tremuloide): es, Alnus	incana, C	Cornus serio	cea, Care	ex crinita, Imp	atiens capen	ısis, Glyceria gı	andis, Carex r	etrorsa.
Aquatic Habitats (ex: Riffles, overhanging v	submerged or egetation.	emerged a	quatic vegeta	tion, overhangi	ng banks/ro	oots, leaf packs, la	irge submerged v	wood, riffles, deep po	ools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live Runoff from dirt road,	stock acces culvert, do	s, manure wnstrear	in waterbo n beaver o	dy, waste dis dam, histori	charge pi ic loggino	pes): g activity.				
Observation Notes: The feature is somew	hat disrupt	ed by his	storic loggi	ing activity	and road	l runoff, and i	s associated	with alder thick	et wetland was	sc045s.



sasc030i_E (upstream)



sasc030i_S (across)



sasc030i_W (downstream)

Waterbody Data Sile	<u> </u>						
Description							
Project Name:			Date:			Waterbody S	urvey ID:
Line 5 Relocation Project			2019-09-25			sasc025e	
State:	County/Parish:		USGS Water	body Name:			
WI	Ashland		UNT to Billy	Creek			
Company:	Crew Member Init	ials:	Latitude:			Longitude:	
Enbridge	BRG/JSW		46.388911			-90.763609	
Survey Type: (check one)	erline ☐ Re-Rou	ute □ <i>P</i>	Access Road	□Facility	□Other		
Waterbody Type: ☐ Rive	r ☑ Stream		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: ☐ No V (check one)	/ater ☑ Clear		Turbid	☐Sheen on Surface	□Surfac	e Scum □A	lgal Mats □Other
Existing Condition ^a : High (check one)	ly Functional Stream	✓ Moderately	/ Functional S	tream [Functionally	Impaired Strea	am
Feature Description: V Natu	ral 🗆 Artificia	I, man-made □ I	Manipulated				
Flow Regime:	emeral 🗆 Intermi	ttent 🗆 I	Perennial	☐ Connect Swale	ing		
Sinuosity within	ght 🗹 Meand	ering					
Measurements							
Depth of Water: 0.2 ft.	N/A□ Unknow	_{/n□} Water Edge	to Water Ed	ge: <u>2</u> ft.	N/A□	OHWM Width	n: <u>2</u> ft.
OHWM Indicator:	Clear line on bank	□Shelving	□Wrested ve	getation	☑ Scouring		□Water staining
<u> </u>	Bent, matted, or ssing vegetation	□Wrack line	□Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	Bedrock ☐ Bou	ılder 🗆 Cobb	le □ G	ravel	☑ Sand	□ Silt/ clay	☐ Organic
Observations							
	Yes 🗆 N	10					
Vegetation Layers:	Trees 🗆 S	Saplings/Shrubs	✓ Herbs				
Dominant Bank Vegetation (Phalaris arundinacea, Glyceria	ist): a striata, Carex crinita	, Tilia americana.					
Aquatic Habitats (ex: submerged Overhanging vegetation.		on, overhanging banks/ro	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	ools, etc.):	
Aquatic Organisms Observe None.	d (list):						
Disturbances (ex: livestock acc Runoff from paved road.	ess, manure in waterbod	ly, waste discharge pi	ipes):				
Observation Notes: The feature has thickly vegeta woodlands instead of the wetl	•	of reed canary gras	ss, and is asso	ociated with w	vetland wasc00	32e. Parts of th	ne feature border upland



sasc025e_E (across)



sasc025e_N (downstream)



sasc025e_S (upstream)

Waterbody Data 5	HICCL									
Description										
Project Name:						Date:			Waterbody	Survey ID:
Line 5 Relocation Project						2019-09-14			sasa031e	
State:		County/	Parish:			USGS Wate	body Name	:		
WI		Ashland				UNT to Mare	ngo River			
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	iL			46.401058			-90.835043	
Survey Type:	Centerli	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type:	River		✓ Strean	n		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: 🗹	No Wat	er	☐ Clear		_T	Γurbid	☐Sheen on Surface	□Surfac	e Scum 🗆	Algal Mats □Other
Existing Condition ^a :	Highly	Function	al Stream		Moderately	y Functional S		Functionally	Impaired Stre	eam
Feature Description: (check one)	Natural		☐ Artificia	al, man-m	nade 🗹	Manipulated				
Flow Regime: 🗹	Ephem	eral	☐ Interm	ittent		Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor:	Straigh	t	✓ Meand	dering						
Feature meanders throug	II a II C a	ivily graz	eu pastur	е.						
Measurements										
Depth of Water:ft		N/A 🗹	Unknov	wn 🗆 🛮 W	ater Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Widt	t h: <u>1</u> ft.
OHWM Indicator: (check all that apply)	□ Cl	ear line o	on bank	□Shel	ving	□Wrested ve	egetation	□Scouring		□Water staining
(опоск ин ини арруу)		nt, matte ng veget		□Wrad	ck line	□Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	drock	□ Во	ulder	☐ Cobb	le 🗆 G	iravel	☐ Sand	坚 Silt/ cla	y 🗆 Organic
Observations										
Riparian Zone Present: (check one)	□ Ye	s		No						
Vegetation Layers: (check all that apply)	□ Tre	ees		Saplings/	Shrubs	☑ Herbs				
Dominant Bank Vegetati Phleum pratense, Poa pra	on (list) atensis.):								
Aquatic Habitats (ex: subm None.			quatic vegeta	tion, overha	nging banks/ro	oots, leaf packs, la	rge submerged w	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms Observance.	erved (list):								
Disturbances (ex: livestoc Heavily grazed cattle past		s, manure	in waterboo	dy, waste o	discharge pi	ipes):				
Observation Notes: Currently dry.										



sasa031e_NW (downstream)



sasa031e_SE (upstream)



sasa031e_W (across)

Waterbouy Date	Once									
Description										
Project Name:						Date:			Waterbody	Survey ID:
Line 5 Relocation Proje	ect					2019-09-14			sasa032i	
State:		County/F	Parish:			USGS Wate	body Name	:		
WI		Ashland				UNT to Mare	ngo River			
Company:		Crew Me	mber Init	ials:		Latitude:			Longitude:	
Enbridge		NTT/DG	L			46.400467			-90.834227	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Rou	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	□ River		☑ Stream	ı		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	✓ No Wat	ter	□ Clear			Turbid	☐Sheen on Surface	n □Surfac	e Scum	Algal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	al Stream	☐ Mod	erately	y Functional S		Functionally	Impaired Stre	eam
Feature Description: (check one)	✓ Natural		☐ Artificia	ıl, man-made	e 🗆	Manipulated				
Flow Regime: (check one)	□ Ephem	eral	✓ Intermi	ttent		Perennial	☐ Connection	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	☑ Meand	ering						
The waterbody is an ir	nermilleri	meanuei	ing sitean	miocated wit	ıııı a ı	leavily grazed	pasture.			
Measurements										
Depth of Water:	_ft.	N/A 🗹	Unknov	vn□ Wate	r Edge	e to Water Ed	je: ft.	N/A 🗹	OHWM Wid	th: <u>5</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shelving		☑ Wrested ve	getation	☑ Scouring		□Water staining
(oroon all that apply)		nt, matte		□Wrack lin	ne	☑ Litter and o	lebris	☑ Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	☑ Boι	ulder 🗹	Cobb	ile 🗹 G	ravel	☑ Sand	☐ Silt/ cla	y 🗆 Organic
Observations										
Riparian Zone Presen	t: 🗆 Ye	es		No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/Shr	ubs	✓ Herbs				
Dominant Bank Vege Symphyotrichum lateri	tation (list florum, Fra): axinus pe	nnsylvani	ca, Ulmus ar	nerica	na, Acer rubru	m.			
Aquatic Habitats (ex: s Small pools of standing	submerged or g water pro	emerged aq esent.	uatic vegetat	ion, overhanging	banks/r	oots, leaf packs, la	rge submerged w	wood, riffles, deep po	ools, etc.):	
Aquatic Organisms O None.	bserved ((list):								
Disturbances (ex: lives Area is heavily influence				ly, waste disch	narge pi	ipes):				
Observation Notes: Large boulders throug	hout the st	tream bed	d. Steep b	anks with sc	attered	d American elı	n and red ma	aple. Majority o	f the bank ha	as upland grass species.



sasa032i_E (across)



sasa032i_N (downstream)



sasa032i_S (upstream)

Trate: Beay Batt	4 011000									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Pro	ect					2019-09-14			sasa033e	
State:		County/	Parish:			USGS Wate	rbody Name	:		
WI		Ashland	I			UNT to Mar	engo River			
Company:		Crew Mo	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	SL/MAL			46.400248			-90.831949	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ River		✓ Stream	n		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☑ No Wa	ter	☐ Clear		1	Turbid	☐Sheen or	ı □Surfac	e Scum □Al	gal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	al Stream		Moderately	y Functional S	Surface Stream [Functionally	Impaired Strea	m
Feature Description: (check one)	☐ Natural		☐ Artificia	al, man-n	nade 🗹	Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	it	✓ Meano	dering						
Measurements										
Depth of Water:	ft.	N/A 🗹	Unknov	wn 🗆 🛚 🚺	/ater Edge	e to Water Ed	ge: ft.	N/A 🗹	OHWM Width	: <u>4</u> ft.
OHWM Indicator: (check all that apply)	□ Cl	ear line	on bank	□Shel	lving	□Wrested v	egetation	☑ Scouring		□Water staining
(спеск ан тасарру)		ent, matte ing veget		□Wra	ck line	☑ Litter and	debris	☑ Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☐ Cobb	le 🗆 (Gravel	□ Sand	坚 Silt/ clay	□ Organic
Observations										
Riparian Zone Preser	nt: 🗆 Ye	es	V 1	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	/Shrubs	✓ Herbs				
Dominant Bank Vege Fraxinus pennsylvanio	ca, Persica	ria amph	-		ŭ					
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overha	inging banks/r	oots, leaf packs, l	arge submerged v	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live Cattle access.	stock acces	s, manure	in waterboo	dy, waste	discharge p	ipes):				
Observation Notes: No water currently pre	esent.									



sasa033e_N (downstream)



sasa033e_S (upstream)



sasa033e_W (across)

Trator Soay Batt	. 011000											
Description												
Project Name:							Date:			Waterbody S	urvey ID:	
Line 5 Relocation Proj	ect						2019-09-14			sasa034i		
State:		County/	Parish:				USGS Water	body Name	:			
WI		Ashland	ł				UNT to Mare	ngo River				
Company:		Crew M	ember Ini	tials:			Latitude:			Longitude:		
Enbridge		MAL/DO	3L				46.400152			-90.828802		
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	oute		□A	ccess Road	□Facility	□Other			
Waterbody Type:	□ River		✓ Stream	n			Ditch	☐ Swale	☐ Cana	Ι 🗆 (Other	
Water Appearance: (check one)	☐ No Wat	er	☐ Clear			√Tı	urbid	☐Sheen on Surface	□Surfac	ce Scum 🗆 A	lgal Mats	□Other
Existing Condition a: (check one)	□ Highly	Function	nal Stream	n 🗹	Modera	tely	Functional S		☐ Functionally	Impaired Strea	am	
Feature Description:	✓ Natural		☐ Artifici	al, man-	made	□ N	/lanipulated					
Flow Regime:	☐ Ephem	eral	✓ Interm	nittent		□ F	Perennial	☐ Connection	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	☑ Meand	dering				Owale				
Description Notes:												
Measurements	£4	NI/A 🖂	Unknov		Water Fo	dae	to Water Ed	no: 3 ft	N/A□	OHWM Width	n: 9 ft.	
Depth of Water: 0.5	ft.	N/A□	Unkno	wn□	water E	age	to water Ed	ge: <u>3</u> π.	N/A∟	OHWIWI WIGHT	ı: <u>9</u> ii.	
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	□She	elving		✓ Wrested very limited very limited with the property of	egetation	✓ Scouring	•	□Water sta	aining
		nt, matte		□Wra	ack line		□Litter and o	lebris	□Abrupt plar change	nt community	□Soil chara	acteristic
Dominant Substrate: (check all that apply)	□ Ве	drock	□ Во	oulder	Co	bble	e 	ravel	☐ Sand	Silt/ clay	□ Or	rganic
Observations												
Riparian Zone Preser (check one)	nt: 🗆 Ye	es	✓	No								
Vegetation Layers: (check all that apply)	☑ Tr	ees	✓ :	Saplings	s/Shrubs		✓ Herbs					
Dominant Bank Vege												
Acer saccharum, Popu					•		. , ,					
Aquatic Habitats (ex: s Riffles, pools.	submerged or	emerged a	quatic vegeta	ation, overh	nanging ban	ks/ro	ots, leaf packs, la	rge submerged w	vood, riffles, deep p	ools, etc.):		
Aquatic Organisms C	bserved (list):										
None.												
Disturbances (ex: lives The waterbody is distu					•		,	n overhead p	oowerline, and	invasive speci	es.	
Observation Notes:												
Feature continues out	side survey	y corrido	r.									



sasa034i_E (across)



sasa034i_N (downstream)



sasa034i_S (upstream)

APPENDIX F

Waterbody Data Sheets
Part 9 of 24

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbody	Survey ID:	
Line 5 Relocation Pro	ject					2019-09-14			sasa035e		
State:		County/l	Parish:			USGS Wate	rbody Name	<u> </u>			
WI		Ashland				UNT to Brun	sweiler River				
Company:		Crew Me	ember Init	ials:		Latitude:			Longitude:		
Enbridge		NTT/DG	L			46.399010			-90.822388		
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type: (check one)	☐ River		✓ Stream	1		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	✓ No Wat	ter	☐ Clear		□Т	Turbid	☐Sheen on Surface	Surfac	e Scum 🔲	Algal Mats	□Other
Existing Condition ^a : (check one)	☐ Highly	Function	al Stream		Moderately	y Functional S		Functionally	Impaired Stre	eam	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-m	nade 🗆 l	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connection	ting			
Sinuosity within Survey Corridor: (check one)	☑ Straigh	t	☐ Meand	lering							
Ephemeral drainage of	on in		oy railli lie	na. Otoop	, orougu p	umo. Quum	g dopon dion.	g the Ballito Mi	ii a giodila la	yer er erries.	ar storile.
Measurements											
Depth of Water:	ft.	N/A 🗹	Unknov	vn□ W	ater Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Widt	t h: 9 ft	
OHWM Indicator: (check all that apply)	⊔ CI	ear line o	on bank	□Shel	ving	□Wrested v	egetation	☑ Scouring		□Water s	taining
		nt, matte		□Wrac	ck line	☑ Litter and	debris	✓ Abrupt plan change	t community	□Soil cha change	racteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	□ Cobb	le 🗹 🤇	Gravel	□ Sand	☑ Silt/ cla	у 🗆 С	Organic
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es	<u> </u>	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/	Shrubs	✓ Herbs					
Dominant Bank Vege Bromus inermis, Sym	etation (list phyotrichur): n lateriflo	orum, Pop	ulus trem	uloides.						
Aquatic Habitats (ex: No standing water thr	submerged or oughout.	emerged aq	quatic vegetat	tion, overhar	nging banks/ro	oots, leaf packs, la	irge submerged w	vood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Cattle grazed.	stock acces	s, manure	in waterboo	dy, waste d	discharge pi	ipes):					
Observation Notes: Bank width around 12	teet. Heaν	rily erode	d with ste	ep slopes	S.						



sasa035e_E (across)



sasa035e_N (downstream)



sasa035e_S (upstream)

Tratorbody But	4 011000										
Description											
Project Name:						Date:			Waterbody S	urvey ID:	
Line 5 Relocation Pro	ect					2019-09-1	4		sasa036e		
State:		County/	Parish:			USGS Wa	terbody Name	e :			
WI		Ashland	i			UNT to Br	unsweiler Rive	er			
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:		
Enbridge		NTT/DG	SL			46.398556			-90.821259		
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Ro	ute		Access Roa	d □Facility	□Other	l		
Waterbody Type: (check one)	□ River		✓ Stream	n		Ditch	☐ Swale	☐ Cana	I 🗆 (Other	
Water Appearance:	✓ No Wat	ter	☐ Clear			Turbid	□Sheen o	n □Surfac	ce Scum 🗆 🛭	Igal Mats	□Other
(check one) Existing Condition ^a : (check one)	□ Highly	Function	nal Stream	n 🗆	Moderate	ely Functional	Surface Stream	⊈ Functionally	Impaired Strea	am	
Feature Description: (check one)			☐ Artificia		made 🗆	Manipulated	I				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connec	cting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	☑ Meand	dering			<u> </u>				
Measurements Depth of Water:	ft.	N/A Ľ	Unknov	wn□ V	Vater Edg	ge to Water E	i dge: f	N/A V	OHWM Width	n: <u>2</u> ft.	
OHWM Indicator:		ear line	on hank	□She	lvina	□Wrested	vegetation	□Scouring		□Water stai	ning
(check all that apply)	□Be	nt, matte	ed, or		ick line	≝ Litter and	•	☑Abrupt planchange	t community	✓Soil charachange	•
Dominant Substrate: (check all that apply)	□В€	edrock	௴ Во	ulder	□ Cob	ble 🔽	Gravel	□ Sand	坚 Silt/ clay	☐ Org	janic
Observations											
Riparian Zone Preser (check one)	nt: 🗆 Ye	es	V 1	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	/Shrubs	☐ Herb	OS .				
Dominant Bank Vege Acer saccharum, Tilia	etation (list americana): i, Populu	ıs tremuloi	ides.							
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overha	anging banks	/roots, leaf packs	, large submerged	wood, riffles, deep p	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Fallen trees and debri	stock acces: s througho	s, manure ut. Large	in waterboo e boulders	dy, waste	discharge	pipes):					
Observation Notes: Channel was dry at tir	me of surve	÷y.									



sasa036e_N (upstream)



sasa036e_S (downstream)



sasa036e_W (across)

Trate: Beay Bat	4 011000										
Description											
Project Name:							Date:			Waterbody St	ırvey ID:
Line 5 Relocation Pro	ect						2019-09-14			sasa037e	
State:		County	/Parish:				USGS Wate	body Name	9 :	L	
WI		Ashland	t				UNT to Brun	sweiler Rive	er		
Company:		Crew M	ember Ini	tials:			Latitude:			Longitude:	
Enbridge		NTT/DC	JL				46.397656			-90.822480	
Survey Type: (check one)	✓ Center	line	☐ Re-Ro	ute		□A	ccess Road	□Facility	□Other	•	
Waterbody Type: (check one)	☐ River		✓ Stream	n			Ditch	☐ Swale	☐ Cana	I 🗆 C	Other
Water Appearance: (check one)	☑ No Wa	ter	☐ Clear			⊒Τ	urbid	☐Sheen o Surface	n □Surfac	e Scum	gal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream	1 [Moderat	tely	Functional S		Functionally	Impaired Strea	m
Feature Description: (check one)							Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		□F	Perennial	☐ Connection Connection	cting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	nt	☑ Meand	dering							
Measurements											
Depth of Water:	ft.	N/A 	Unknov	wn□	Water Ed	lge	to Water Ed	ge: ft	N/A V	OHWM Width	: <u>4</u> ft.
OHWM Indicator: (check all that apply)	□С	lear line	on bank	□Sh	elving		□Wrested ve	egetation	☑ Scouring		☐Water staining
(oroon all that apply)		ent, matte ing vege		□Wr	ack line		☑ Litter and o	lebris	□Abrupt plar	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	☐ Col	bbl	e 🗆 G	ravel	□ Sand	坚 Silt/ clay	□ Organic
Observations											
Riparian Zone Preser	nt: 🗹 Ye	es		No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Sapling	s/Shrubs		☐ Herbs				
Dominant Bank Vege Acer saccharum, Abie	etation (list es balsame	t): a, Ulmus	s americar	na.							
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	ition, over	hanging bank	ks/ro	ots, leaf packs, la	rge submerged	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms (None.	Observed	(list):									
Disturbances (ex: live None.	stock acces	s, manure	in waterbo	dy, waste	e discharge	e pip	pes):				
Observation Notes: Feature associated w	ith the floo	dplain of	the Bruns	weiler F	River (was	sa0	83f).				



sasa037e_E (downstream)



sasa037e_S (across)



sasa037e_W (upstream)

waterbody bate	a Officet										
Description											
Project Name:						Date:			Waterbody	Survey ID:	
Line 5 Relocation Pro	ject					2019-09-14			sasa039e		
State:		County/	Parish:			USGS Water	body Name:				
WI		Ashland	I				sweiler River				
Company:		Crew M	ember Initi	ials:		Latitude:			Longitude:		
Enbridge		NTT/DG	SL/MAL			46.397529			-90.822378		
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Rou	ıte		Access Road	□Facility	□Other			
Waterbody Type:	□ River		✓ Stream	l		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	✓ No Wat	ter	☐ Clear		□Т	Turbid	□Sheen on Surface	□Surfac	e Scum 🛚	Algal Mats	□Other
Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream	☐ Mode	rately	/ Functional S		Functionally	Impaired Str	eam	
Feature Description: (check one)	✓ Natural		☐ Artificia	l, man-made		Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Intermi	ttent		Perennial	☐ Connect Swale	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	☑ Meand	ering							
Magauramenta											
Measurements Depth of Water:	ft.	N/A 🗹	Unknow	m □ Water	Edge	to Water Ed	qe: ft.	N/A 🗹	OHWM Wid	lth: 2 ft	
Deptil of Water.	11.	IN/AL	OTINTOW	Water	Lugu	to water Ea	yo. n.	14// (O11111111 11114	.u <u>z</u>	•
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	□Shelving		□Wrested ve	egetation	☑ Scouring		□Waters	staining
(onesit all that apply)		nt, matte	,	□Wrack line	€	☑ Litter and o	lebris	✓ Abrupt plan change	t community	□Soil cha	aracteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	☑ Bou	ılder 🗆 (Cobbl	le 🗹 G	iravel	☐ Sand	I Silt/ cla	ay 🗆 (Organic
Observations											
Riparian Zone Preser (check one)	nt: 🗌 Ye	es	M V	lo .							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/Shrul	bs	✓ Herbs					
Dominant Bank Vege Acer saccharum and	etation (list Abies bals): amea tra	nisitioning t	to Fraxinus ni	gra a	nd Ulmus am	ericana in the	floodplain. Gr	ound layer is	s sparse throu	ughout.
Aquatic Habitats (ex: No water throughout of	submerged or drainage.	emerged a	quatic vegetati	on, overhanging b	anks/ro	oots, leaf packs, la	rge submerged w	rood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Fallen trees and debri			in waterbod	ly, waste discha	irge pi	pes):					
Observation Notes: Located on steep side	es slope. Bo	oulders a	and rock the	roughout the	chanr	nel.					



sasa039e_NE (downstream)



sasa039e_SW (upstream)



sasa039e_W (across)

Trate: Beay Batt	4 011000									
Description										
Project Name:						Date:			Waterbody Su	urvey ID:
Line 5 Relocation Pro	ject					2019-09-14			sasa038p	
State:		County/F	Parish:			USGS Wate	erbody Name) :		
WI		Ashland				Brunsweiler	River			
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	L			46.397609			-90.820410	
Survey Type: (check one)	✓ Center	ine	☐ Re-Ro	oute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☑ River		☐ Stream	n		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☐ No Wa	ter	✓ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum □Al	gal Mats □Other
Existing Condition ^a : (check one)	☑ Highly	Function	al Stream	n 🗆	Moderatel	y Functional :		☐ Functionally	Impaired Strea	m
Feature Description: (check one)	✓ Natura		☐ Artifici	al, man-ı		Manipulated				
Flow Regime: (check one)	☐ Ephem		☐ Interm		V	Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	it	✓ Mean	dering						
Measurements										
Depth of Water:	ft.	N/A□	Unkno	wn 🗹 🛛 V	Vater Edge	e to Water Ed	lge : <u>40</u> ft	. N/A□	OHWM Width	: <u>40</u> ft.
OHWM Indicator:	 ✓ C	ear line o	n bank	□She	elving	□Wrested v	regetation	□Scouring		□Water staining
(check all that apply)		ent, matte		□Wra	ack line	☑ Litter and	debris	☑Abrupt plan change	t community	☑Soil characteristic change
Dominant Substrate: (check all that apply)	□Ве	edrock	☑ Bo	ulder	☐ Cobb	ole 🗆 (Gravel	☑ Sand	☐ Silt/ clay	□ Organic
Observations										
Riparian Zone Preser	nt: 🗹 Ye	es		No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	s/Shrubs	✓ Herbs	3			
Dominant Bank Vege Equisetum fluvatile, F	etation (list raxinus pe	r): nnsylvani	ca, Acer ı	rubrum,	Ranunculu	s acris.				
Aquatic Habitats (ex: Riffles, overhanging v	submerged or egetation.	emerged aq	uatic vegeta	ition, overh	anging banks/r	roots, leaf packs, l	arge submerged v	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms O Frogs, minnows, aqua	Observed atic inverte	(list): brates.								
Disturbances (ex: live Debris along stream.	stock acces	s, manure	in waterbo	dy, waste	discharge p	ipes):				
Observation Notes: Feature associated w	ith floodpla	in forest.								



sasa038p_E (across)



sasa038p_NE (downstream)



sasa038p_SW (upstream)

Trato. Souy But	4 011000												
Description													
Project Name:						Date:				Waterbod	y Sur	vey ID:	
Line 5 Relocation Pro	ect					2019-09-	26			sasa052p			
State:		County	/Parish:			USGS W	aterbody Na	ıme:					
WI		Ashland	d			Brunswe	ler River						
Company:		Crew M	lember Ini	tials:		Latitude:				Longitude):		
Enbridge		NTT/D0	GL			46.39669	2			-90.81998	5		
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Ro	ute		Access Ro	ad □Facilit	ty	□Other				
Waterbody Type: (check one)	☑ River		☐ Stream	n		Ditch	☐ Swa	le	☐ Canal	[□ Oth	ner	
Water Appearance:	☐ No Wat	er	☑ Clear			Turbid	□Sheer		Surfac	e Scum [□Alga	al Mats	□Other
(check one) Existing Condition a: (check one)	☐ Highly	Functio	nal Stream) [Moderate	ely Function	Surface al Stream		ctionally	Impaired S	tream		
Feature Description: (check one)	✓ Natural		☐ Artifici	al, man-	made \square	Manipulate	ed						
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Con Swale	necting					
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	✓ Mean	dering									
Measurements Depth of Water: 0.5	ft.	N/A□	Unknov	wn□ \	Water Edç	ge to Water	Edge: <u>25</u>	_ ft.	N/A 🗆	OHWM Wi	idth:	40ft.	
OHWM Indicator:	□ CI	ear line	on bank	□She	elving	✓Wreste	d vegetation	□Sc	ouring			⊒Water st	aining
(check all that apply)		nt, matte		□Wra	ack line	Ľ Litter a	nd debris	Ľ Ab chan		t communit		∃Soil char :hange	racteristic
Dominant Substrate: (check all that apply)	□ Ве	drock	⊻ Во	ulder	☐ Cob	ble [Gravel	⊻ Sa	and	□ Silt/ c	lay	□ 0	rganic
Observations													
Riparian Zone Preser	nt: 🗆 Ye	s	V	No									
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	s/Shrubs	☑ He	rbs						
Dominant Bank Vege Thuja occidentalis, Ad	etation (list er rubrum,) <u>:</u> Equiset	tum sp., Gl	lyceria s	triata.								
Aquatic Habitats (ex: Shallow pools.	submerged or	emerged a	aquatic vegeta	ition, overh	anging banks	s/roots, leaf pacl	s, large submerç	ged wood, riff	les, deep po	ools, etc.):			
Aquatic Organisms (None.	Observed (list):											
Disturbances (ex: live Debris and fallen tree	stock access s surroundi	s, manure ng wetla	e in waterbo and banks.	dy, waste	discharge	pipes):							
Observation Notes: None.													



sasa052p_N (upstream)



sasa052p_S (downstream)



sasa052p_W (across)

Trato. Souy Batt	4 011000													
Description														
Project Name:						Date:					Waterboo	dy Su	rvey ID:	
Line 5 Relocation Pro	ect					2019-09	-26				sasa053e	е		
State:		County/	/Parish:			USGS W	Vaterk	oody Name) :		<u> </u>			
WI		Ashland	t			UNT to	Bruns	weiler Rive	r					
Company:		Crew M	ember Ini	tials:		Latitude):				Longitud	le:		
Enbridge		NTT/DO	3 L			46.3967	56				-90.8188	57		
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Ro	ute		Access Ro	oad	□Facility		Other	l			
Waterbody Type:	□ River		✓ Stream	n		Ditch		□ Swale		Cana		□ O	ther	
Water Appearance:	✓ No Wat	ter	☐ Clear			Turbid		☐Sheen or	n [Surfac	e Scum	□Al	gal Mats	□Other
(check one) Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream	n 🗆	Moderate	ely Function		Surface ream [Func	tionally	Impaired S	Strear	m	
Feature Description: (check one)	☐ Natural		☐ Artificia	al, man-	-made 🕑	Manipulat	ted							
Flow Regime:	☑ Ephem	eral	☐ Interm	ittent		Perennia		□ Connec Swale	cting					
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Mean	dering				owalo						
M easurements														
Depth of Water:	ft.	N/A 🗹	Unknov	wn□	Water Edg	ge to Wate	r Edg	e: ft.		N/A 🗹	OHWM W	Vidth:	: <u>4</u> ft.	
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	□Sh	elving	☑Wrest	ed ve	getation	□Sco	uring			□Water st	taining
		nt, matte ng vege		□Wr	ack line	☑ Litter a	and de	ebris	□Abr chang		t commun	nity	□Soil chai change	racteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	□ Cob	ble	□ Gr	avel	坚 Sar	nd	□ Silt/	clay	□ 0	rganic
Observations														
Riparian Zone Preser (check one)	nt: □ Ye	es		No										
Vegetation Layers: (check all that apply)	☑ Tr	ees		Sapling	s/Shrubs	☑ He	erbs							
Dominant Bank Vege Thuja occidentalis, Pt	e tation (list eridium aqı): uilinum,	Equisetum	ı sp., Sy	ymphyotric	hum sp.								
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overh	hanging banks	s/roots, leaf pa	cks, larç	ge submerged v	wood, riffle	es, deep p	ools, etc.):			
Aquatic Organisms (None.	Observed ((list):												
Disturbances (ex: live ATV activity.	stock acces	s, manure	in waterbo	dy, waste	e discharge	pipes):								
Observation Notes: None.														



sasa053e_E (across)



sasa053e_N (downstream)



sasa053e_S (upstream)

Trate: Beay Batt	4 011000										
Description											
Project Name:						Date:				Waterbody S	urvey ID:
Line 5 Relocation Pro	ject					2019	-09-26			sasa054i	
State:		County/	/Parish:			USGS	6 Wate	rbody Name) :		
WI		Ashland	d			UNT	to Brur	sweiler Rive	r		
Company:		Crew M	ember Ini	tials:		Latitu	de:			Longitude:	
Enbridge		NTT/DG	GL			46.39	6399			-90.818225	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access	Road	□Facility	□Other	•	
Waterbody Type: (check one)	☐ River		☑ Strean	n		Ditch		☐ Swale	☐ Cana	al 🗆 (Other
Water Appearance: (check one)	☑ No Wa	ter	☐ Clear			Turbid		☐Sheen or Surface	n □Surfa	ce Scum □A	lgal Mats □Other
Existing Condition a: (check one)	☐ Highly	Function	nal Stream	1 🗆	Moderate	ely Func	tional S		' Functionally	Impaired Strea	am
Feature Description: (check one)					-made 🗆						
Flow Regime: (check one)	□ Ephem	eral	✓ Interm			Pereni	nial	☐ Connection Connection	cting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	✓ Meano	dering							
Measurements											
Depth of Water:	ft.	N/A 🗹	Unknov	wn□	Water Ed	ge to Wa	ter Ed	ge: ft	. N/A 🗹	OHWM Width	n: <u>6</u> ft.
OHWM Indicator:		ear line	on hank	□Sh	elving	□Wre	ested v	egetation	□Scouring		□Water staining
(check all that apply)	□Ве	nt, matte	ed, or		ack line		er and	•		nt community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	□ Cob	ble		Gravel	☐ Sand	 Silt/ clay	☐ Organic
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es	V	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees	Ø :	Sapling	s/Shrubs	V	Herbs				
Dominant Bank Vege Acer saccharum, Tsu	ga canadei	ńsis, Abi		,	•						
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overh	nanging banks	s/roots, leaf	packs, la	arge submerged	wood, riffles, deep	pools, etc.):	
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live None.	stock acces	s, manure	in waterbo	dy, waste	e discharge	pipes):					
Observation Notes: Large boulders throug	ghout portic	ons of the	e waterboo	dy.							



sasa054i_E (across)



sasa054i_N (downstream)



sasa054i_S (upstream)

Trate: Beay Bat	4 011000										
Description											
Project Name:						Date):			Waterbody St	urvey ID:
Line 5 Relocation Pro	ject					201	9-09-26			sasa055e	
State:		County/	/Parish:			USG	S Wate	rbody Name) :	•	
WI		Ashland	t			UNT	to Brur	nsweiler Rive	r		
Company:		Crew M	ember Ini	tials:		Latit	ude:			Longitude:	
Enbridge		NTT/DO	3L			46.3	96684			-90.817602	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	oute		Acces	s Road	□Facility	□Other	•	
Waterbody Type: (check one)	□ River		☑ Strear	n		Ditch		☐ Swale	☐ Cana	al 🗆 C	Other
Water Appearance: (check one)	✓ No War	ter	☐ Clear			∃Turbio		☐Sheen or Surface	n □Surfa	ce Scum □A	lgal Mats □Other
Existing Condition a: (check one)	□ Highly	Function	nal Stream	n [Moderate	ely Fun	ctional S		' Functionally	Impaired Strea	ım
Feature Description: (check one)	✓ Natural		☐ Artifici	al, man	-made [□ Manip	oulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm			☐ Perei	nnial	☐ Connection Connection	cting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	it	✓ Mean	dering							
Measurements											
Depth of Water:	ft.	N/A 🗹	Unkno	wn□	Water Ed	ge to W	ater Ed	lge: ft	. N/A 🗹	OHWM Width	: <u>2</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	□Sh	elving	ØW	rested v	egetation	Scouring		□Water staining
(спеск ан тасарру)		ent, matte ing vege		□Wr	rack line	☑ Lit	ter and	debris	□Abrupt pla change	nt community	□Soil characteristic change
Dominant Substrate: (check all that apply)	□В€	edrock	□ Во	oulder	□ Cok	oble		Gravel	☐ Sand	Silt/ clay	□ Organic
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es	V	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Sapling	s/Shrubs		∃ Herbs				
Dominant Bank Vege Tsuga canadensis, Ad	etation (list cer saccha	rum.									
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	ation, overl	hanging bank	s/roots, le	af packs, la	arge submerged	wood, riffles, deep	pools, etc.):	
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live None.	stock acces	s, manure	in waterbo	dy, wast	e discharge	pipes):					
Observation Notes: Feature flows into inte	ermittent wa	aterbody	⁄ sasa054i								



sasa055e_E (downstream)



sasa055e_S (across)



sasa055e_W (upstream)

Trate: Beay Bat	4 011000									
Description										
Project Name:						Date:			Waterbody St	urvey ID:
Line 5 Relocation Pro	ject					2019-09-2	6		sasa056e	
State:		County/	Parish:			USGS Wa	erbody Nam	e:	I	
WI		Ashland	i			UNT to Bri	unsweiler Rive	er		
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	GL			46.396440			-90.817562	
Survey Type: (check one)	✓ Center	ine	☐ Re-Ro	ute		Access Road	d □Facility	□Other		
Waterbody Type: (check one)	☐ River		✓ Strear	n		Ditch	☐ Swale	☐ Cana	I 🗆 C	Other
Water Appearance: (check one)	✓ No Wa	ter	☐ Clear			Turbid	☐Sheen o	on □Surfac	e Scum	lgal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream	n 🗆	Moderate	ely Functional		■ Functionally	Impaired Strea	ım
Feature Description: (check one)	✓ Natura		☐ Artifici	al, man-	made 🗆	Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm			Perennial	☐ Conne Swale	cting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	it	✓ Mean	dering						
Measurements										
Depth of Water:	ft.	N/A 🗹	Unkno	wn□	Water Edg	ge to Water E	dge: f	t. N/A🗹	OHWM Width	: <u>2</u> ft.
OHWM Indicator:	ПС	ear line	on hank	□She	elving	□Wrested	vegetation	□Scouring		□Water staining
(check all that apply)	□Ве	ent, matte	ed, or		ack line	≝Litter and	•	□Abrupt plar	t community	□Soil characteristic change
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	□ Cob	ble 🗆	Gravel	□ Sand	 Silt/ clay	☐ Organic
Observations										
Riparian Zone Preser	nt: 🗆 Ye	es	V	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	s/Shrubs	☐ Herb	OS .			
Dominant Bank Vege Tsuga canadensis, Ad	etation (list cer saccha	') : rum.								
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	ition, overh	nanging banks	s/roots, leaf packs	, large submerged	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms (None.	Observed	(list):								
Disturbances (ex: live None.	stock acces	s, manure	in waterbo	dy, waste	e discharge	pipes):				
Observation Notes: None.										



sasa056e_E (upstream)



sasa056e_S (across)



sasa056e_W (downstream)

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbody	Survey ID:	
Line 5 Relocation Pro	ject					2019-09-26			sasa057e		
State:		County/I	Parish:			USGS Wate	rbody Name	:			
WI		Ashland				UNT to Brun	sweiler River	r			
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:		
Enbridge		NTT/DG	L			46.395832			-90.818298		
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type: (check one)	☐ River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	✓ No War	ter	☐ Clear			Turbid	□Sheen on Surface	□Surfac	e Scum 🛚	Algal Mats □Other	
Existing Condition a: (check one)	☐ Highly	Function	al Stream	□ I	Moderately	y Functional S		Functionally	Impaired Str	eam	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-m	nade 🗆	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connection	ting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Meand	dering							
Narrow ephemeral dra	ainage that	meande	rs down a	steep hil	llside. Con	inects to a lar	ger mapped i	ntermittent drai	nage (sasa0)54i).	
Measurements											
Depth of Water:	ft.	N/A 🗹	Unknov	vn□ W	/ater Edge	e to Water Ed	ge: ft.	N/A 🗹	OHWM Wid	Ith: 2 ft.	
	 ;										
OHWM Indicator: (check all that apply)	□ CI	ear line c	on bank	□Shel	ving	□Wrested v	egetation	□Scouring		□Water staining	
		nt, matte		□Wrad	ck line	☑ Litter and	debris	□Abrupt plan change	t community	☐Soil characteristic change	
Dominant Substrate: (check all that apply)		edrock	□ Во	ulder	□ Cobb	le 🗆 C	Gravel	□ Sand	☑ Silt/ cla		
Observations											
Riparian Zone Prese	nt: 🗆 Ye	es	<u> </u>	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/	Shrubs	☐ Herbs					
Dominant Bank Vege Tsuga canadensis, Po	etation (list opulus trem	r): nuloides.									
Aquatic Habitats (ex: None.	submerged or	emerged aq	quatic vegetal	tion, overha	nging banks/r	oots, leaf packs, la	arge submerged w	wood, riffles, deep po	pols, etc.):		
Aquatic Organisms (None.	Observed	(list):									
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste o	discharge p	ipes):					
Observation Notes: None.											



sasa057e_E (downstream)



sasa057e_S (across)



sasa057e_W (upstream)

Waterbody Data	Once									
Description										
Project Name:						Date:			Waterbody S	Survey ID:
Line 5 Relocation Proje	ect					2019-09-26			sasa059e	
State:		County/l	Parish:			USGS Water	body Name			
WI		Ashland				UNT to Brun	sweiler River	•		
Company:		Crew Me	ember Init	ials:		Latitude:			Longitude:	
Enbridge		NTT/DG	iL			46.396216			-90.816697	
Survey Type: [✓ Centerl	ine	☐ Re-Ro	ute	□A	Access Road	□Facility	□Other		
Waterbody Type: [River		✓ Stream	1		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: [(check one)	☑ No Wat	ter	☐ Clear		□Т	urbid	☐Sheen on Surface	□Surfac	e Scum □/	Algal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	al Stream		/loderately	Functional S	tream [Functionally	Impaired Stre	am
Feature Description: [(check one)	✓ Natural		☐ Artificia	al, man-m	ade 🗆 l	Manipulated				
Flow Regime: [E phem	eral	☐ Interm	ittent		Perennial	☐ Connect	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Meano	lering						
Narrow ephemeral drai	nago triat	Turio dov	wir a steep	, rimolado e	along a ne	avily assayr.	v traii.			
Measurements										
Depth of Water:	ft.	N/A 🗹	Unknov	vn 🗆 🛮 W	ater Edge	to Water Ed	je: ft.	N/A	OHWM Widt	h: <u>3</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	□Shelv	/ing	□Wrested ve	getation	□Scouring		□Water staining
(спеск ан шагарру)		nt, matte ing veget		□Wrac	k line	☑ Litter and o	lebris	□Abrupt plan change	t community	□Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☑ Cobbl	le 🗆 G	ravel	☑ Sand	☐ Silt/ clay	y □ Organic
Observations										
Riparian Zone Present	∷ □ Ye	es	<u> </u>	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/S	Shrubs	☐ Herbs				
Dominant Bank Veget Tsuga canadensis, Uln	ation (list	cana.								
Aquatic Habitats (ex: su None.			quatic vegetat	tion, overhan	nging banks/ro	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	ools, etc.):	
Aquatic Organisms Ol None.	bserved ((list):								
Disturbances (ex: lives ATV trail runs parallel t	tock access o drainag	s, manure e.	in waterboo	dy, waste d	lischarge pi	pes):				
Observation Notes: Feature flows into an ir	itermitteni	t feature	(sasa058i).						



sasa059e_E (upstream)



sasa059e_S (across)



sasa059e_W (downstream)

Waterbody Date	a Officet									
Description										
Project Name:						Date:			Waterbody S	urvey ID:
Line 5 Relocation Pro	ect					2019-09-26			sasa058i	
State:		County/F	Parish:			USGS Wate	body Name	•		
WI		Ashland				UNT to Brun	sweiler River			
Company:		Crew Me	mber Init	ials:		Latitude:			Longitude:	
Enbridge		NTT/DG	L			46.395486			-90.816550	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	□ River		☑ Stream	1		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☑ No Wa	ter	□ Clear		1	Turbid	☐Sheen on Surface	□Surfac	e Scum □A	lgal Mats □Other
Existing Condition a: (check one)	☐ Highly	Function	al Stream	□ Mo	derately	y Functional S		⊈ Functionally	Impaired Strea	am
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-mad	e 🗆	Manipulated				
Flow Regime: (check one)	☐ Ephem	eral	✓ Intermi	ittent		Perennial	☐ Connection	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	☑ Meand	lering						
Narrow meandering d throughout. Forest car	-					inues into ano	urer mæmmu	ent leature (Sas	sauo+ij. Lillei	and debits present
Measurements										
Depth of Water:	ft.	N/A 🗹	Unknov	vn□ Wate	er Edge	e to Water Ed	ge: ft.	N/A 🗹	OHWM Width	n: <u>4</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shelvin	9	□Wrested v	egetation	□Scouring		□Water staining
(опсек ан так арруу)		ent, matte		□Wrack li	ine	☑ Litter and o	lebris	□Abrupt plan change	t community	□Soil characteristic change
Dominant Substrate: (check all that apply)	□В€	edrock	□ Воι	ulder [Cobb	le □ G	iravel	☐ Sand	 Silt/ clay	□ Organic
Observations										
Riparian Zone Preser (check one)	nt: 🗆 Ye	es		No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/Sh	rubs	☐ Herbs				
Dominant Bank Vege Tsuga canadensis, Po	etation (list opulus bals	') : amifera.								
Aquatic Habitats (ex: None.			uatic vegetat	ion, overhangin	g banks/ro	oots, leaf packs, la	rge submerged w	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms O None.	Observed ((list):								
Disturbances (ex: live Litter and debris throu		s, manure	in waterboo	dy, waste disc	harge pi	ipes):				
Observation Notes: Feature connects to s	asa054i ou	utside the	survey ar	ea.						



sasa058i_E (downstream)



sasa058i_N (across)



sasa058i_W (upstream)

Trate: Beay Bat	4 011000									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Pro	ject					2019-09-26			sasa060e	
State:		County/	Parish:			USGS Wate	rbody Name	:		
WI		Ashland	i			UNT to Brur	sweiler Rive	r		
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	SL			46.395288			-90.815344	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute	\Box \digamma	Access Road	□Facility	□Other		
Waterbody Type: (check one)	□ River		✓ Strean	n		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☑ No Wa	ter	☐ Clear		1	Turbid	☐Sheen or Surface	n □Surfac	e Scum	gal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream		Moderately	y Functional S		Functionally	Impaired Strea	m
Feature Description: (check one)						Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm			Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	✓ Meano	dering						
Measurements										
Depth of Water:	ft.	N/A 🗹	Unknov	wn 🗆 🛚 🕨	Vater Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Width	: <u>3</u> ft.
OHWM Indicator: (check all that apply)	□ Cl	ear line	on bank	□Shel	lving	☑ Wrested v	egetation	□Scouring		□Water staining
(споск ан так арруу)		nt, matte ing vege		□Wra	ck line	□Litter and	debris	□Abrupt plan	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☐ Cobb	le 🗆 (Gravel	☐ Sand	坚 Silt/ clay	☐ Organic
Observations										
Riparian Zone Preser (check one)	nt: 🗆 Ye	es		No						
Vegetation Layers: (check all that apply)	□ Tr	ees		Saplings/	/Shrubs	✓ Herbs				
Dominant Bank Vege Scirpus cyperinus, Ph	etation (list leum prate): nse, Poa	a pratensis	S.						
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overha	anging banks/re	oots, leaf packs, la	arge submerged v	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live Heavily grazed and co					discharge pi	ipes):				
Observation Notes: None.										



sasa060e_E (across)



sasa060e_N (downstream)



sasa060e_S (upstream)

Trate. Bedy Bat.	<u>u 01100t</u>									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Pro	ject					2019-09-26			sasa050e	
State:		County/	Parish:			USGS Wate	rbody Name	:		
WI		Ashland	i			UNT of Brun	sweiler River	r		
Company:		Crew M	ember Init	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	SL			46.393536			-90.819273	
Survey Type: (check one)	☐ Centerl	ine	☐ Re-Ro	ute	ØA	Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ River		☐ Stream	า	V (Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	✓ No War	ter	☐ Clear		□Т	urbid	☐Sheen on Surface	ı □Surfac	e Scum □Al	gal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream	□М	oderately	Functional S		Functionally	Impaired Strea	m
Feature Description: (check one)	☐ Natural		✓ Artificia	al, man-ma	ade 🗆 l	Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor: (check one)	☑ Straigh	it	□ Meano	dering						
Measurements										
Depth of Water:	ft.	N/A 🗹	Unknov	wn 🗆 🛮 Wa	ter Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Width	: <u>2</u> ft.
OHWM Indicator:	ПС	ear line	on bank	□Shelvi	ina	☑ Wrested v	egetation	□Scouring		□Water staining
(check all that apply)	□Ве	ent, matte ing vege	ed, or	□Wrack	-	□Litter and	-	□Abrupt plan	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□В€	edrock	□ Во	ulder	□ Cobbl	le 🗆 C	Gravel	□ Sand	 Silt/ clay	□ Organic
Observations										
Riparian Zone Prese	nt: 🗆 Ye	es	V 1	No						
Vegetation Layers:	☑ Tr	ees	Ø (Saplings/S	Shrubs	✓ Herbs				
Dominant Bank Vege Populus tremuloides,	etation (list Phleum pr	') : atense, E	Bromus ine	ermis.						
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegetal	tion, overhang	ging banks/ro	oots, leaf packs, la	rge submerged w	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live Man-made feature be					scharge pi	pes):				
Observation Notes: None.										



sasa050e_E (across)



sasa050e_N (downstream)



sasa050e_S (upstream)

Waterbody Data	Officet									
Description										
Project Name:						Date:			Waterbody	Survey ID:
Line 5 Relocation Proje	ct					2019-09-26			sasa051e	
State:		County/l	Parish:			USGS Wate	rbody Name	:		
WI		Ashland				UNT to Brun	sweiler Rive	r		
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	L			46.393561			-90.818372	
Survey Type: [check one)	☐ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: [River		☐ Stream	1	V	Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☑ No Wat	er	☐ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum 🛚	Algal Mats □Other
Existing Condition ^a : [☐ Highly	Function	al Stream	☐ Mode	erately	y Functional S		Functionally	Impaired Stre	eam
Feature Description: [(check one)	□ Natural		☐ Artificia	al, man-made		Manipulated				
Flow Regime: (check one)	Z Ephem	eral	☐ Interm	ittent		Perennial	☐ Connec	ting		
Sinuosity within Survey Corridor: (check one)	☑ Straigh	t	☐ Meand	lering						
Description Notes: Drainage ditch that runs	s through	tilled farr	m field.							
Measurements										
Depth of Water:	ft.	N/A 🗹	Unknov	vn□ Water	Edge	e to Water Ed	ge: ft.	N/A 🗹	OHWM Wid	th: 2ft.
OHWM Indicator:	☑ CI	ear line c	on bank	 □Shelving		□Wrested ve	egetation	Scouring		□Water staining
(check all that apply)		nt, matte ng veget		□Wrack lin	ie	□Litter and o	debris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	drock	□ Во	ulder 🗆	Cobb	ole 🗆 G	Gravel	□ Sand	☑ Silt/ cla	y 🗆 Organic
Observations										
Riparian Zone Present (check one)	: □ Ye	es	I	No						
Vegetation Layers: (check all that apply)	□ Tr	ees		Saplings/Shru	ıbs	☑ Herbs				
Dominant Bank Vegeta Recently tilled- no vege	ation (list tation.):								
Aquatic Habitats (ex: su None.	Ibmerged or	emerged aq	quatic vegetat	tion, overhanging	banks/r	oots, leaf packs, la	rge submerged v	wood, riffles, deep po	ools, etc.):	
Aquatic Organisms Ob None.	oserved (list):								
Disturbances (ex: livest Located within a tilled fa	ock access arm field.	s, manure	in waterboo	dy, waste disch	arge pi	ipes):				
Observation Notes: None.										



sasa051e_E (across)



sasa051e_N (downstream)



sasa051e_S (upstream)

vaterbody bata	a Silect									
Description										
Project Name:						Date:			Waterbody S	Survey ID:
Line 5 Relocation Pro	ject					2019-09-27			sasa061e	
State:		County/l	Parish:			USGS Wate	rbody Name	:		
WI		Ashland				UNT to Brun	sweiler Rive	r		
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	iL			46.393448			-90.808084	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ River		☐ Stream	n	V	Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	✓ No War	ter	☐ Clear			Turbid	☐Sheen on	n □Surfac	e Scum 🗆	Algal Mats □Other
Existing Condition a: (check one)	□ Highly	Function	al Stream		Moderatel	y Functional S	Surface Stream	Functionally	Impaired Stre	am
Feature Description: (check one)	☐ Natural		✓ Artificia	al, man-r	nade 🗆	Manipulated				
Flow Regime: (check one)	E Ephem	eral	☐ Interm	ittent		Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor: (check one)	☑ Straigh	t	☐ Meand	dering			Swale			
Ephemeral ditch that	runs down	a steep r	niiside and	a connec	cis to a larç	ge mapped ra	vine outside t	ne survey com	gor.	
Measurements										
Depth of Water:	ft.	N/A 🗹	Unknov	wn□ V	Vater Edge	e to Water Ed	ge: ft.	N/A 🗹	OHWM Widt	h: <u>2</u> ft.
OHWM Indicator:	□ CI	ear line o	on bank	□She	lving	□Wrested v	egetation	Scouring		☐Water staining
(check all that apply)		nt, matte ing veget		□Wra	ck line	☑ Litter and	debris	□Abrupt plan	t community	□Soil characteristic change
Dominant Substrate: (check all that apply)	□В€	edrock	□ Во	ulder	☐ Cobb	ole 🗆 🤇	Gravel	☐ Sand	I Silt/ clay	y 🗆 Organic
Observations										
Riparian Zone Preser (check one)	nt: 🗆 Ye	es	I	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	V S	Saplings	/Shrubs	☑ Herbs				
Dominant Bank Vege Solidago canadensis,	etation (list Cornus sp): ., Phleum	n pratense	e, Abies	balsamea.					
Aquatic Habitats (ex: None.	submerged or	emerged ac	quatic vegetat	tion, overha	anging banks/r	oots, leaf packs, la	arge submerged v	wood, riffles, deep po	ools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live Located along an acti			in waterboo	dy, waste	discharge p	ipes):				
Observation Notes: None.										



sasa061e_E (across)



sasa061e_NE (downstream)



sasa061e_SW (upstream)

Waterbody Date	a Sileet										
Description											
Project Name:						Date:			Waterbody	Survey ID:	
Line 5 Relocation Proj	ect					2019-10-02			sasb012p		
State:		County/I	Parish:			USGS Wate	rbody Name	: :			
WI		Ashland				UNT to Brun	sweiler River	r			
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude:		
Enbridge		KDF/SAI	M			46.391321			-90.808420)	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	□ River		☑ Strean	า		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	☐ No Wat	ter	✓ Clear			Turbid	□Sheen on Surface	□Surfac	e Scum 🗆	∃Algal Mats	□Other
Existing Condition a: (check one)	☐ Highly	Function	al Stream	V I	Moderatel	y Functional S		☐ Functionally	Impaired Str	ream	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-n	nade 🗆	Manipulated					
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connection	ting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	☑ Meand	dering							
Description Notes: The perennial stream sandbars are present			t mesic fo	rest, with	n trees linii	ng the banks.	Steep slopes	are present or	n either side	of the stream.	Small
'											
Measurements Depth of Water: 0.25	5 ft	N/A□	Unknov	_{vn} □ W	later Edge	e to Water Ed	ge: 5 ft	N/A 🗆	OHWM Wic	dth: 7 ft.	
beput of Water. O.Z.	<u>, it.</u>	IV/AL	OTIMION			- 10 11 a.c a.	90.	,, .			
OHWM Indicator: (check all that apply)	□ CI	ear line c	n bank	□Shel	ving	□Wrested v	egetation	☑ Scouring		□Water sta	aining
(check all that apply)		nt, matte		□Wra	ck line	☑ Litter and	debris	□Abrupt plan change	t community	/ □Soil char change	acteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	☑ Bo	ulder	□ Cobb	ole 🗆 C	Gravel	☑ Sand	☐ Silt/ cla	ay 🗆 Oı	rganic
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es	V 1	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees	V :	Saplings/	/Shrubs	☑ Herbs					
Dominant Bank Vege Equisetum hyemale, E	tation (list Equisetum): sylvaticur	m, Fraxinı	us nigra,	Betula pa	pyrifera, Care	c pedunculata	a.			
Aquatic Habitats (ex. Riffles, downed wood)	submerged or y debris, ov	emerged aq verhangin	uatic vegeta ng bank ar	tion, overhand roots.	nging banks/r	roots, leaf packs, la	arge submerged w	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms O None.	Observed ((list):									
Disturbances (ex: live Evidence of erosion.	stock access	s, manure	in waterboo	dy, waste	discharge p	ipes):					
Observation Notes: Feature continues out	side surve	y corridor	· <u>·</u>								



sasb012p_NE (downstream)



sasb012p_S (upstream)



sasb012p_SE (across)

APPENDIX F

Waterbody Data Sheets
Part 10 of 24

Tratersea, Batt	2 011000									
Description										
Project Name:						Date:			Waterbody Si	urvey ID:
Line 5 Relocation Proj	ect					2019-09-27	•		sasa062p	
State:		County/	Parish:			USGS Wat	erbody Name) :	l	
WI		Ashland	I			UNT to Bru	nsweiler Rive	r		
Company:		Crew Mo	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	SL			46.393369			-90.805863	
Survey Type: (check one)	☑ Centerle	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	□ River		✓ Strean	n		Ditch	☐ Swale	☐ Cana	I 🗆 C	Other
Water Appearance: (check one)	☐ No Wa	ter	☑ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum	lgal Mats □Other
Existing Condition a: (check one)	☐ Highly	Function	nal Stream	ı 🗆	Moderate	ly Functional		 Functionally	Impaired Strea	ım
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-		Manipulated				
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm		V	Perennial	☐ Connect Swale	cting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	✓ Meanor	dering						
Measurements										
Depth of Water: 0.5	ft.	N/A□	Unknov	wn□	Water Edg	e to Water E	dge: <u>2</u> ft	. N/A□	OHWM Width	: <u>6</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	□She	elving	□Wrested	vegetation	□Scouring		□Water staining
(orion all that apply)		nt, matte		□Wra	ack line	☑ Litter and	debris	☑ Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☑ Cobl	ble 🗆	Gravel	☑ Sand	□ Silt/ clay	□ Organic
Observations										
Riparian Zone Preser (check one)	nt: 🗹 Ye	es		No						
Vegetation Layers: (check all that apply)	□ Tr	ees	Ø :	Saplings	s/Shrubs	☑ Herb	S			
Dominant Bank Vege Salix petiolaris, Scirpu	tation <i>(list</i> is hattoriar): ius, Phal	aris arund	linacea.						
Aquatic Habitats (ex: Overhanging vegetation	submerged or On.	emerged a	quatic vegeta	tion, overh	anging banks	roots, leaf packs,	large submerged	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms C None.)bserved ((list):								
Disturbances (ex: live None.	stock acces	s, manure	in waterbo	dy, waste	discharge _l	pipes):				
Observation Notes: Associated with wetland	nd wasa12	1.								



sasa062p_N (downstream)



sasa062p_S (upstream)



sasa062p_W (across)

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbody	/ Survey ID:	
Line 5 Relocation Pro	ect					2019-09-25			sase008e		
State:		County/I	Parish:			USGS Wate	rbody Name	:			
WI		Ashland				UNT to Brur	sweiler River	r			
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:	:	
Enbridge		KDF/AR	K			46.389414			-90.805211	1	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type: (check one)	□ River		☑ Stream	n		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	☑ No Wa	ter	□ Clear			Turbid	□Sheen on Surface	□Surfac	e Scum 🗆	□Algal Mats	□Other
Existing Condition a: (check one)	☐ Highly	Function	al Stream	V	Moderatel	y Functional S		☐ Functionally	Impaired Str	ream	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-	made 🗆	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connec	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	nt	✓ Meand	dering							
M easurements											
Depth of Water:	ft.	N/A 🗹	Unknov	wn□ \	Water Edge	e to Water Ed	ge: ft.	N/A 🗹	OHWM Wid	dth:1f	t.
OHWM Indicator:	□ C	ear line o	n bank	□She	elvina	□Wrested v	egetation	✓ Scouring		□Waters	staining
(check all that apply)		ent, matte ing veget			ack line	□Litter and	•	□Abrupt plan	t community		aracteristic
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder		ole 🗆 (Gravel	□ Sand	I Silt/ cla	ay 🗆 (Organic
Observations											
Riparian Zone Preser	nt: 🗹 Ye	es		No							
Vegetation Layers: (check all that apply)	☑ Tr	ees	V S	Saplings	s/Shrubs	✓ Herbs					
Dominant Bank Vege Fraxinus pennsylvanio	tation <i>(list</i> ca, Rubus	·): pubescer	ns, Osmur	nda clay	toniana, Ad	cer rubrum, Co	ornus rugosa.				
Aquatic Habitats (ex: None.	submerged or	emerged aq	uatic vegetat	tion, overh	anging banks/r	roots, leaf packs, la	arge submerged w	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste	discharge p	ipes):					
Observation Notes: Feature continues out	side surve	y corridor									



sase008e_E (upstream)



sase008e_N (across)



sase008e_W (downstream)

Waterbody Data Sile	,					
Description						
Project Name:			Date:		Waterbody Su	rvey ID:
Line 5 Relocation Project			2019-10-03		sasb017p	
State:	County/Parish:		USGS Waterbody Name	:		
WI	Ashland		UNT to Brunsweiler River	r		
Company:	Crew Member Initials:		Latitude:		Longitude:	
Enbridge	KDF/SAM		46.386887		-90.801879	
Survey Type: (check one)	erline Re-Route	□A	Access Road □Facility	□Other		
Waterbody Type: ☐ River (check one)	☑ Stream		Ditch ☐ Swale	☐ Cana	□ 0	ther
Water Appearance: ☐ No W	/ater ☐ Clear	ØT	urbid □Sheen or Surface	n □Surfac	e Scum □Al	gal Mats □Other
	ly Functional Stream	Moderately		☐ Functionally	Impaired Strea	m
Feature Description: V Natu	ral □ Artificial, man	-made 🗆 l	Manipulated			
Flow Regime:	emeral 🗆 Intermittent	V	Perennial 🗆 Connec Swale	ting		
Sinuosity within ☐ Strai Survey Corridor: (check one)	ght Meandering					
The perennial stream is locate			,	,		,
Measurements						
Depth of Water: 0.25 ft.	N/A□ Unknown□	Water Edge	to Water Edge: 2.5 ft.	N/A□	OHWM Width:	: <u>4</u> ft.
OHWM Indicator:	Clear line on bank ☐Sh	elving	☐Wrested vegetation	☑ Scouring		□Water staining
<u> </u>	Bent, matted, or ☐Wr ssing vegetation	rack line	☑ Litter and debris	□Abrupt plan	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	Bedrock ☐ Boulder	☑ Cobbl	le 🗆 Gravel	□ Sand	坚 Silt/ clay	□ Organic
Observations						
	Yes ☑ No					
Vegetation Layers:	Trees 🗹 Sapling	s/Shrubs	☑ Herbs			
Dominant Bank Vegetation (I Ostrya virginiana, Tilia america	<i>ist)</i> : ana, Hamamelis virginiana, l	Fraxinus nigi	ra.			
Aquatic Habitats (ex: submerged Downed woody debris, overhal	or emerged aquatic vegetation, overl nging banks and roots.	hanging banks/ro	oots, leaf packs, large submerged v	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms Observed None.	d (list):					
Disturbances (ex: livestock acc Apparent erosion on both bank						
Observation Notes: Influenced by storm events res	sulting in debris within the st	ream.				



sasb017p_N (downstream)



sasb017p_S (upstream)



sasb017p_W (across)

Waterbody Data	Officet									
Description										
Project Name:						Date:			Waterbody S	Survey ID:
Line 5 Relocation Proje	ect					2019-10-03			sasb018e	
State:		County/F	Parish:			USGS Wate	body Name	•		
WI		Ashland				UNT to Brun	sweiler River			
Company:		Crew Me	ember Init	ials:		Latitude:			Longitude:	
Enbridge		KDF/SAI	M			46.385988			-90.800239	
Survey Type: [check one)	✓ Centerl	ine	☐ Re-Ro	ute	$\Box A$	Access Road	□Facility	□Other		
	□ River		✓ Stream	1		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☑ No Wa	ter	☐ Clear		□Т	Turbid	☐Sheen on Surface	□Surfac	e Scum 🗆 🗸	Algal Mats □Other
	☐ Highly	Function	al Stream	☑ Mo	derately	y Functional S		☐ Functionally	Impaired Stre	am
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-mad	de 🗆 l	Manipulated				
Flow Regime: (check one)	E phem	eral	☐ Intermi	ittent		Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	☑ Meand	lering						
The ephemeral stream	is located	l in a ravi	ne within	mesic hard	wood fo	rest.				
Measurements										
Depth of Water:	ft.	N/A ✓	Unknov	vn□ Wat	er Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Widt	h: <u>4</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shelvin	ng	□Wrested v	egetation	☑ Scouring		□Water staining
(спеск ан шагарру)		nt, matte		□Wrack	line	☑ Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Воι	ulder [☑ Cobb	le 🗆 G	iravel	□ Sand	I Silt/ clay	y □ Organic
Observations										
Riparian Zone Present	: □ Ye	es	V 1	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	v 9	Saplings/Sh	rubs	✓ Herbs				
Dominant Bank Vegeta Fraxinus nigra, Ostrya			m acerifol	lium, Onocl	ea sens	ibilis, Athyriur	n filix-femina			
Aquatic Habitats (ex: su Small pools, downed w			uatic vegetat	tion, overhangir	ng banks/ro	oots, leaf packs, la	rge submerged w	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms Ol None.	oserved ((list):								
Disturbances (ex: livest Garbage and debris pre	tock access esent with	s, manure iin stream	in waterboo า.	dy, waste dise	charge pi	ipes):				
Observation Notes: Feature flows through v	wetland w	asb044e.								



sasb018e_NE (downstream)





sasb018e_SW (upstream)

Waterbody Date	a Sileet									
Description										
Project Name:						Date:			Waterbody	Survey ID:
Line 5 Relocation Pro	ject					2019-10-03			sasb019p	
State:		County/	Parish:			USGS Wate	rbody Name):		
WI		Ashland				UNT to Brur	nsweiler Rive	r		
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		KDF/SA	М			46.383452			-90.798440	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ River		✓ Strean	n		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	□ No Wa	ter	☑ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum	Algal Mats □Other
Existing Condition a: (check one)	☑ Highly	Function	al Stream		Moderatel	y Functional S		☐ Functionally	Impaired Stre	eam
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-ı	made 🗆	Manipulated				
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	Ø	Perennial	☐ Connec	ting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	it	✓ Mean	dering						
Measurements										
Depth of Water: 0.5	<u>ft</u> .	N/A□	Unknov	wn 🗆 🛚 🗸	Water Edge	e to Water Ed	l ge: <u>5</u> ft.	N/A□	OHWM Wid	th: 9 ft.
OHWM Indicator:	□ Cl	ear line o	on bank	□She	elving	□Wrested v	egetation	☑ Scouring		□Water staining
(check all that apply)		nt, matte	,	□Wra	ack line	□Litter and	debris	□Abrupt plan change	t community	□Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☑ Cobb	ole 🗆 (Gravel	☑ Sand	□ Silt/ cla	y Drganic
Observations										
Riparian Zone Preser	nt: 🗆 Ye	es	V	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	s/Shrubs	☑ Herbs				
Dominant Bank Vege Solidago gigantea, Ru	etation (list ubus allegh): eniensis,	, Fraxinus	nigra, B	setula alleg	haniensis, Ulr	nus americar	na, Carex spp.		
Aquatic Habitats (ex. Downed woody debris	submerged or S, SOME are	emerged ac	quatic vegeta erhanging	tion, overha	anging banks/i	roots, leaf packs, la riffles.	arge submerged v	wood, riffles, deep po	ools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste	discharge p	pipes):				
Observation Notes: Exposed sandbars pr	esent. Fea	ture conti	inues outs	side surv	ey corridor	r.				



sasb019p_N (downstream)



sasb019p_S (upstream)



sasb019p_W (across)

Trate: Beay Batt	4 011000									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Proj	ect					2019-10-03			sasd009e	
State:		County	/Parish:			USGS Wate	rbody Name) :		
WI		Ashland	t			UNT to Brui	nsweiler Rive	r		
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		AGG/O	TG			46.383594			-90.797756	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	□ River		☑ Strean	n		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☐ No Wa	ter	☑ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum □Al	gal Mats □Other
Existing Condition ^a :	☐ Highly	Function	nal Stream	ı 🗆	Moderatel	y Functional S		⊈ Functionally	Impaired Strea	m
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-	made \square	Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm			Perennial	☐ Connect Swale	cting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	it	☑ Meand	dering						
waterbody (sasb019p		rsueam	located at	tile bot	tom or a rai	ge swale. Th	e leature now	is through fores	t and terminate	es in a larger perennial
Measurements										
Depth of Water: 0.25	5_ft.	N/A□	Unknov	wn 🗆 🛮 🕦	Water Edg	e to Water Ed	lge: <u>1</u> ft.	. N/A□	OHWM Width	: <u>1</u> ft.
OHWM Indicator: (check all that apply)	□ Cl	ear line	on bank	□She	elving	□Wrested v	egetation	Scouring		□Water staining
(спеск ан тасарру)		ent, matte ing vege		□Wra	ack line	□Litter and	debris	□Abrupt plan	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☐ Cobb	ole 🗆 (Gravel	☐ Sand	坚 Silt/ clay	□ Organic
Observations										
Riparian Zone Preser	nt: 🗆 Ye	es		No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	s/Shrubs	✓ Herbs	}			
Dominant Bank Vege Fraxinus nigra, Tilia a	tation (list mericana,	') <u>:</u> Equisetu	ım hyemal	e.						
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overh	anging banks/	roots, leaf packs, l	arge submerged v	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms O None.	Observed ((list):								
Disturbances (ex: live There is an ATV trail of	stock acces going throu	s, manure igh the fe	e in waterboo eature.	dy, waste	e discharge p	pipes):				
Observation Notes: There are areas when	e the strea	m chanr	nel become	es very o	diffuse.					



sasd009e_N (across)



sasd009e_NW (downstream)



sasd009e_SE (upstream)

Trace. Sea y Back	4 011000									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Proj	ect					2019-10-03			sasd008e	
State:		County/	Parish:			USGS Wate	rbody Name):		
WI		Ashland	i			UNT to Brur	sweiler Rive	r		
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		AGG/O	TG			46.383326			-90.796072	
Survey Type: (check one)	✓ Center	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	□ River		✓ Strear	n		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☐ No Wa	ter	☐ Clear		V	Turbid	☐Sheen or Surface	n □Surfac	e Scum □Al	gal Mats □Other
Existing Condition a: (check one)	☐ Highly	Function	nal Stream	n 🗆	Moderatel	y Functional S		Functionally	Impaired Strea	m
Feature Description: (check one)			☐ Artifici			Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	nt	☑ Mean	dering						
Measurements										
Depth of Water: 0.25	5_ ft.	N/A□	Unkno	wn 🗆 🛛 V	Vater Edge	e to Water Ed	ge: <u>1</u> ft.	. N/A□	OHWM Width	: <u>1</u> ft.
OHWM Indicator:	┏ C	ear line	on bank	□She	elving	□Wrested v	egetation	Scouring		□Water staining
(check all that apply)	⊠ Be miss	ent, matte ing vege	ed, or tation	□Wra	ack line	□Litter and	debris	□Abrupt plan	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	☐ Cobb	ole 🗆 (Gravel	□ Sand	 Silt/ clay	□ Organic
Observations										
Riparian Zone Preser	nt: 🗆 Ye	es	V	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	ď	Saplings	s/Shrubs	✓ Herbs				
Dominant Bank Vege Tilia americana, Fraxi	tation <i>(list</i> nus nigra,	'): Ostrya vi	irginiana,	Carex cr	inita.					
Aquatic Habitats (ex: Litter and debris.	submerged or	emerged a	quatic vegeta	ition, overh	anging banks/r	oots, leaf packs, l	arge submerged v	wood, riffles, deep po	ools, etc.):	
Aquatic Organisms O None.	Observed	(list):								
Disturbances (ex: live ATV trail passes throu			in waterbo	dy, waste	discharge p	ipes):				
Observation Notes: Feature continues out	side surve	y corrido	r.							



sasd008e_NE (downstream)



sasd008e_NW (across)



Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbod	y Survey ID:	
Line 5 Relocation Proj	ect					2019-09-28			sase015e		
State:		County/l	Parish:			USGS Wate	rbody Name	•			
WI		Ashland				UNT to Trou	t Brook				
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude):	
Enbridge		KDF/AR	K			46.383151			-90.78793	0	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute	□A	Access Road	□Facility	□Other			
Waterbody Type: (check one)	☐ River		✓ Stream	า		Ditch	☐ Swale	☐ Canal	[□ Other	
Water Appearance:	☑ No Wa	ter	☐ Clear		□Т	urbid	□Sheen on Surface	□Surfac	e Scum	□Algal Mats	□Other
Existing Condition a: (check one)	☐ Highly	Function	al Stream		/loderately	/ Functional S		Functionally	Impaired S	tream	
Feature Description: (check one)	☐ Natural		☐ Artificia	al, man-m	ade 🗹 l	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connect	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	✓ Meano	dering							
The ephemeral stream	, exteriue			on into a p	adotaro.						
Measurements											
Depth of Water:	ft.	N/A 🗹	Unknov	wn 🗆 Wa	ater Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Wi	idth: 2	ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	□Shelv	/ing	□Wrested v	egetation	☑ Scouring		□Water	staining
(спеск ан тасарруу)		nt, matte ing veget		□Wrac	k line	☑ Litter and o	debris	□Abrupt plan change	t communit	ty □Soil ch change	naracteristic
Dominant Substrate: (check all that apply)	□В€	edrock	□ Во	ulder	☐ Cobbl	le 🗆 G	Gravel	□ Sand	 Silt/ c	clay □	Organic
Observations											
Riparian Zone Preser (check one)	nt: 🗆 Ye	es	I	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees	v (Saplings/S	Shrubs	✓ Herbs					
Dominant Bank Vege Salix petiolaris, Cornu	etation (list s sericea,): Rubus al	leghanien	sis, Solida	ago canad	lensis.					
Aquatic Habitats (ex. Downed woody debris	submerged or	emerged ac	quatic vegetal	tion, overhan	iging banks/ro	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	ools, etc.):		
Aquatic Organisms C None.	Observed ((list):									
Disturbances (ex: live Livestock access.	stock acces	s, manure	in waterboo	dy, waste d	lischarge pi	pes):					
Observation Notes: Feature converges wi	th sase013	e outside	e the surve	ey corrido	r.						



sase015e_N (downstream)



sase015e_SW (upstream)



sase015e_W (across)

Waterbody Data	Officet									
Description										
Project Name:						Date:			Waterbody	Survey ID:
Line 5 Relocation Proje	ect					2019-09-26			sase013e	
State:		County/F	Parish:			USGS Wate	body Name	:		
WI		Ashland				UNT to Trou	t Brook			
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:	
Enbridge		KDF/AR	K			46.383031			-90.787893	
Survey Type: [✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: [(check one)	River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: [(check one)	☑ No Wat	ter	☐ Clear		□Т	Turbid	☐Sheen or Surface	n □Surfac	e Scum 🛚	Algal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	al Stream	□ Мо	derately	/ Functional S		Functionally	Impaired Stre	eam
Feature Description: [(check one)	✓ Natural		☐ Artificia	al, man-mac	de 🗆	Manipulated				
Flow Regime: [check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Meano	lering						
The ephemeral stream	is located	l within a	pasture.							
Measurements										
Depth of Water:	_ft.	N/A ✓	Unknov	wn□ Wate	er Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Wid	th: <u>1</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line c	n bank	□Shelvin	g	□Wrested ve	egetation	☑ Scouring		□Water staining
(спеск ан шагарру)		nt, matte		□Wrack I	line	☑ Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder [Cobb	le 🗆 G	ravel	□ Sand	坚 Silt/ cla	y 🗆 Organic
Observations										
Riparian Zone Present	: ⊻ Y∈	es		No						
Vegetation Layers: (check all that apply)	□ Tr	ees		Saplings/Sh	rubs	✓ Herbs				
Dominant Bank Veget Scirpus atrovirens, Imp	ation (list atiens ca): pensis.								
Aquatic Habitats (ex: su None.	ubmerged or	emerged aq	uatic vegetat	tion, overhangir	ng banks/ro	oots, leaf packs, la	rge submerged v	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms Ol None.	bserved ((list):								
Disturbances (ex: livest Cattle activity, manure				dy, waste disc	charge pi	ipes):				
Observation Notes: Feature associated with	n wetland	wase027	7e.							



sase013e_E (across)



sase013e_N (downstream)



sase013e_S (upstream)

Trate: Beay Batt	. 011000								
Description									
Project Name:					Date:			Waterbody St	ırvey ID:
Line 5 Relocation Proj	ect				2019-09-26			sase012e	
State:		County/Pa	arish:		USGS Wate	rbody Name	e:		
WI		Ashland			UNT to Trou	ut Brook			
Company:		Crew Men	nber Initia	ls:	Latitude:			Longitude:	
Enbridge		KDF/ARK			46.383709			-90.785758	
Survey Type: (check one)	✓ Centerl	ine 🗆	☐ Re-Route		Access Road	□Facility	□Other		
Waterbody Type: (check one)	□ River	<u> </u>	Stream		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	✓ No War	ter 🗆	Clear		Turbid	□Sheen o Surface	n □Surfac	e Scum □Al	gal Mats □Other
Existing Condition ^a :	□ Highly	Functional	l Stream	☑ Moderate	ely Functional S		☐ Functionally	Impaired Strea	m
Feature Description: (check one)				man-made 🗆					
Flow Regime: (check one)	☑ Ephem	eral [☐ Intermitte	ent 🗆	Perennial	☐ Conne	cting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t E	☑ Meander	ing					
Measurements									
Depth of Water:	_ft.	N/A Ľ	Unknown	☐ Water Edg	ge to Water Ed	lge: f	t. N/A🗹	OHWM Width	: <u>3</u> ft.
OHWM Indicator: (check all that apply)	□ Cl	ear line on	bank [□Shelving	□Wrested v	egetation	✓ Scouring		□Water staining
(orook an trial apply)		nt, matted ing vegeta		□Wrack line	☑ Litter and	debris	□Abrupt plan change	t community	□Soil characteristic change
Dominant Substrate: (check all that apply)		edrock	☐ Bould	ler □ Cob	oble 🗆 (Gravel	☑ Sand	□ Silt/ clay	☐ Organic
Observations									
Riparian Zone Preser	it: 🗆 Ye	es	☑ No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	☑ Sa	plings/Shrubs	☑ Herbs	i			
Dominant Bank Vege Fraxinus nigra, Ostrya	tation (list virginiana): , Acer rubi	rum, Corylu	us cornuta, Athy	yrium filix-femir	na, Carex pe	dunculata.		
Aquatic Habitats (ex: s Overhanging bank and	submerged or droots.	emerged aqua	atic vegetation	, overhanging banks	s/roots, leaf packs, I	arge submerged	wood, riffles, deep po	pols, etc.):	
Aquatic Organisms C None.	bserved ((list):							
Disturbances (ex: lives None.	stock acces	s, manure in	waterbody,	waste discharge	pipes):				
Observation Notes: Feature continues out	side surve	y corridor.							



sase012e_N (downstream)



sase012e_NE (across)



sase012e_S (upstream)

Trator Sour Batt	4 011000													
Description														
Project Name:						Date:					Waterboo	dy Su	rvey ID:	
Line 5 Relocation Pro	ect					2019-09	-26				sase011e	9		
State:		County	/Parish:			USGS W	aterb	ody Name	:					
WI		Ashland	b			UNT to	Trout I	Brook						
Company:		Crew M	ember Ini	tials:		Latitude	:				Longitud	е:		
Enbridge		KDF/AF	RK			46.3836	61				-90.78333	34		
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Ro	oute		Access Ro	ad [□Facility		Other				
Waterbody Type:	□ River		✓ Stream	n		Ditch	[Swale		Canal		□ O	ther	
Water Appearance:	✓ No Wat	ter	☐ Clear			Turbid		☐Sheen on	n [Surfac	e Scum	□Alg	gal Mats 🗆 🗆 🔾	Other
(check one) Existing Condition ^a : (check one)	□ Highly	Function	nal Stream) [Moderate	ely Function		Surface eam [☐ Funct	ionally	Impaired S	Strear	n	
Feature Description: (check one)	✓ Natural		☐ Artifici	al, man	-made 🗆	∃ Manipulat	ed							
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	nittent		Perennial		☐ Connect	ting					
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	✓ Mean	dering										
M easurements														
Depth of Water:	ft.	N/A 🗹	Unknov	wn□ l	Water Edg	ge to Water	r Edge	e: ft.		N/A 🗹	OHWM W	/idth:	4ft.	
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	□Sh	elving	□Wreste	ed veg	etation	☑ Sco	uring			□Water staini	ng
		nt, matte ing vege		□Wr	ack line	☑ Litter a	and de	bris	□ Abru change		t commun		□Soil characte change	eristic
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	oulder	□ Cob	ble	□ Gra	avel	 San	ıd	☐ Silt/	clay	☐ Orgai	nic
Observations														
Riparian Zone Preser (check one)	nt: 🗆 Ye	es	V	No										
Vegetation Layers: (check all that apply)	☑ Tr	ees		Sapling	s/Shrubs	☑ He	erbs							
Dominant Bank Vege Betula alleghaniensis	tation (list Fraxinus r	t): nigra, Os	strya virgin	niana, A	cer saccha	arum, Tilia a	americ	ana, Corylı	us cornu	ıta, Car	ex peduno	culata	l.	
Aquatic Habitats (ex: Overhanging banks a	submerged or nd roots.	emerged a	quatic vegeta	ation, overh	hanging banks	s/roots, leaf pad	cks, larg	e submerged w	vood, riffle	s, deep po	pols, etc.):			
Aquatic Organisms (None.	Observed ((list):												
Disturbances (ex: live None.	stock acces	s, manure	in waterbo	dy, waste	e discharge	pipes):								
Observation Notes: Feature extends outsi	de survey	corridor.												



sase011e_E (across)



sase011e_N (downstream)



sase011e_S (upstream)

Waterbody Data Sil	CCL							
Description								
Project Name:				Date:			Waterbody Si	urvey ID:
Line 5 Relocation Project				2019-10-03			sasb016i	
State:	County	/Parish:		USGS Water	body Name			
WI	Ashland	d		UNT to Trou	Brook			
Company:	Crew M	lember Initials:		Latitude:			Longitude:	
Enbridge	KDF/SA	MA		46.384012			-90.782241	
Survey Type: (check one)	enterline	☐ Re-Route	\Box A	Access Road	□Facility	□Other		
Waterbody Type: ☐ Ri	ver	☑ Stream		Ditch	☐ Swale	☐ Canal		Other
(check one)	o Water	☑ Clear		Γurbid	☐Sheen on Surface	□Surfac	e Scum □A	lgal Mats □Other
Existing Condition ^a : H	ighly Function	nal Stream	✓ Moderately	y Functional S	tream [☐ Functionally	Impaired Strea	ım
Feature Description: V Na (check one)	atural	☐ Artificial, m	an-made □	Manipulated				
Flow Regime:	ohemeral	✓ Intermitten	t 🗆	Perennial	☐ Connect Swale	ting		
Sinuosity within Survey Corridor:	raight	✓ Meandering	g					
Measurements								
Depth of Water: 0.25 ft.	N/A□	Unknown□	Water Edge	e to Water Ed	ge: <u>4</u> ft.	N/A□	OHWM Width	: <u>6</u> ft.
OHWM Indicator: (check all that apply)	☐ Clear line	on bank 🔲	Shelving	□Wrested ve	getation	☑ Scouring		□Water staining
	☑Bent, matte missing vege		Wrack line	☑ Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Bedrock	☐ Boulder	· 🗹 Cobb	ole □ G	ravel	□ Sand	 Silt/ clay	☐ Organic
Observations								
	□ Yes	☑ No						
Vegetation Layers: (check all that apply)	✓ Trees	☑ Sapli	ngs/Shrubs	☑ Herbs				
Dominant Bank Vegetation Fraxinus nigra, Acer saccha	າ <i>(list)</i> : arum, Haman	nelis virginiana,	Pyrola elliptica	a, Ribes ameri	canum.			
Aquatic Habitats (ex: submer Downed woody debris, over	ged or emerged a rhanging ban	equatic vegetation, o ks and roots in	verhanging banks/re some areas.	oots, leaf packs, la	rge submerged w	rood, riffles, deep po	ools, etc.):	
Aquatic Organisms Obser None.	ved (list):							
Disturbances (ex: livestock a None.	access, manure	e in waterbody, wa	aste discharge pi	ipes):				
Observation Notes: Debris from storm events in	evident with	in the stream a	nd surrounding	g area. Expose	d sandbars a	are present.		



sasb016i_N (downstream)



sasb016i_S (upstream)



sasb016i_W (across)

Trate: Beay Bat	4 011000									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Pro	ject					2019-10-02			sasb015e	
State:		County/	Parish:			USGS Wate	rbody Name	:		
WI		Ashland	I			UNT to Trou	ıt Brook			
Company:		Crew Mo	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		KDF/SA	M			46.388503			-90.776339	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ River		☐ Stream	n		Ditch	✓ Swale	☐ Cana		Other
Water Appearance: (check one)	☑ No Wa	ter	☐ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum	gal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	al Stream		Moderately	y Functional S		☐ Functionally	Impaired Strea	m
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-	made 🗆	Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	✓ Mean	dering						
Measurements										
Depth of Water:	ft.	N/A 🗹	Unknov	wn 🗆 🛝	Water Edge	e to Water Ed	lge: ft.	N/A 🗹	OHWM Width	: <u>2</u> ft.
OHWM Indicator:	ПС	ear line	on bank	□She	elvina	□Wrested v	egetation	 ✓Scouring		□Water staining
(check all that apply)	 ✓Be	ent, matte	ed, or		ack line	☑ Litter and	•	□ Abrupt plan	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☐ Cobb	ole 🗆 (Gravel	☑ Sand	 Silt/ clay	□ Organic
Observations										
Riparian Zone Preser	nt: 🗆 Ye	es	V	No						
Vegetation Layers:	☑ Tr	ees		Saplings	s/Shrubs	✓ Herbs				
Dominant Bank Vege Equisetum hyemale, <i>i</i>	etation <i>(list</i> Athyrium fil	t): ix-femina	a, Fraxinus	s nigra, l	Betula alleg	haniensis.				
Aquatic Habitats (ex: Downed woody debris	submerged or s, overhanç	emerged ac ging bank	quatic vegeta c and roots	tion, overh	anging banks/r	oots, leaf packs, l	arge submerged v	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live Garbage dumped with			in waterbo	dy, waste	discharge p	ipes):				
Observation Notes: No water is present w	ithin the sv	vale.								



sasb015e_N (upstream)



sasb015e_S (downstream)



sasb015e_W (across)

waterbody bate	a Sileet									
Description										
Project Name:						Date:			Waterbody	Survey ID:
Line 5 Relocation Pro	ject					2019-09-25			sase009p	
State:		County/l	Parish:			USGS Wate	body Name	:		
WI		Ashland				Trout Brook				
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:	
Enbridge		KDF/AR	K			46.388138			-90.775285	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	□ River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		Other Other
Water Appearance: (check one)	□ No Wa	ter	☑ Clear		□Т	urbid	□Sheen on Surface	□Surfac	e Scum 🛚	Algal Mats Other
Existing Condition a: (check one)	☑ Highly	Function	al Stream		/loderately	Functional S		☐ Functionally	Impaired Str	eam
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-m	ade 🗆 l	Manipulated				
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connect Swale	ting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	☑ Meand	dering						
	e banks. A	reas alon			_					e is a greater topographical river, increasing downed
Measurements										
Depth of Water: 1	ft.	N/A□	Unknov	wn 🗆 Wa	ater Edge	to Water Ed	ge: <u>15</u> ft.	N/A□	OHWM Wid	Ith: <u>20</u> ft.
OHWM Indicator:	□ C	ear line o	on bank	□Shelv	ring	□Wrested ve	egetation	☑ Scouring		□Water staining
(check all that apply)		nt, matte		□Wrac	k line	☑ Litter and o	lebris	□Abrupt plan change	t community	□ Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Вог	ulder	□ Cobbl	le 🗹 G	iravel	☑ Sand	☐ Silt/ cla	
Observations										
Riparian Zone Preser	nt: 🗹 Ye	es	1	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	v (Saplings/S	Shrubs	✓ Herbs				
Dominant Bank Vege Acer saccharum, Frax	etation (list inus nigra,) <u>:</u> Ostrya v	virginiana,	Solidago	flexicaulis	s, Tilia americ	ana, Maianth	emum canader	nse.	
Aquatic Habitats (ex: Overhanging banks a	submerged or nd roots, ri	emerged ac ffles, dee	quatic vegetat p pools, d	tion, overhan lowned wo	ging banks/ro oody debri	oots, leaf packs, la IS.	rge submerged w	ood, riffles, deep po	ools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live Erosion, loggin activity		s, manure	in waterboo	dy, waste d	ischarge pi	pes):				
Observation Notes: Feature associated w	ith wetland	wase020	De.							



sase009p_NE (downstream)



sase009p_NW (across)



sase009p_SW (upstream)

APPENDIX F

Waterbody Data Sheets
Part 11 of 24

Waterbody Date	Once									
Description										
Project Name:						Date:			Waterbody	Survey ID:
Line 5 Relocation Proje	ect					2019-10-02			sasb014e	
State:		County/F	Parish:			USGS Water	body Name	:		
WI		Ashland				UNT to Trou	Brook			
Company:		Crew Me	mber Init	ials:		Latitude:			Longitude:	
Enbridge		KDF/SAM	M			46.388602			-90.773070	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Rou	ute		Access Road	□Facility	□Other		
Waterbody Type:	☐ River		□ Stream	1		Ditch	☐ Swale	☐ Canal	V	Other
Water Appearance:	✓ No Wat	ter [□ Clear		□Т	Turbid	☐Sheen or Surface	n □Surfac	e Scum 🛚	Algal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Functiona	al Stream	☑ Mode	rately	/ Functional S		☐ Functionally	Impaired Stre	eam
Feature Description: (check one)	✓ Natural	[☐ Artificia	ıl, man-made		Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Intermi	ttent		Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t I	☑ Meand	ering						
Description Notes: The ephemeral feature sasb013e.	e starts as	a gully ar	nd is locat	ed in a ravine	withi	n mesic hardv	vood forest, v	with trees lining	the banks. T	The feature connects with
Measurements										
Depth of Water:	_ft.	N/A ✓	Unknow	vn□ Water I	Edge	to Water Ed	je: ft.	N/A 🗹	OHWM Wid	th: <u>2</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shelving		□Wrested ve	getation	☑ Scouring		□Water staining
(Check all that apply)		nt, matted ing vegeta		□Wrack line	;	☑ Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Воι	ılder □ (Cobb	le 🗆 G	ravel	௴ Sand	□ Silt/ cla	y 🗆 Organic
Observations										
Riparian Zone Presen	t: 🗆 Ye	es	I	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	Ø 9	Saplings/Shrub	s	✓ Herbs				
Dominant Bank Vege Fraxinus nigra, Acer ru lateriflorum, Mitchella	ıbrum, Tili	·): a america	ına, Pyrola	a elliptica, Car	ех ре	edunculata, A	hyrium filix-f	emina, Solidag	o flexicaulis,	Symphyotrichum
Aquatic Habitats (ex: s Downed woody debris		emerged aqu ging banks	uatic vegetati s and root	ion, overhanging b	anks/ro	oots, leaf packs, la	rge submerged v	wood, riffles, deep po	ools, etc.):	
Aquatic Organisms O None.	bserved ((list):								
Disturbances (ex: lives None.	stock access	s, manure i	n waterbod	ly, waste discha	rge pi	ipes):				
Observation Notes: No water is present wi	thin the sv	vale.								



sasb014e_E (upstream)



sasb014e_SW (across)



sasb014e_W (downstream)

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbody	y Survey ID:	
Line 5 Relocation Pro	ect					2019-10-02			sasb013e		
State:		County/I	Parish:			USGS Water	body Name	:			
WI		Ashland				UNT to Trou	t Brook				
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude	:	
Enbridge		KDF/SAI	М			46.388606			-90.773126	6	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	☐ River		☐ Stream	า		Ditch	✓ Swale	☐ Canal		☐ Other	
Water Appearance: (check one)	☑ No Wa	ter	☐ Clear		□Т	Turbid	□Sheen on Surface	n □Surfac	e Scum [□Algal Mats	□Other
Existing Condition a: (check one)	☐ Highly	Function	al Stream	7	Moderately	/ Functional S		☐ Functionally	Impaired St	tream	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-m	nade 🗆 I	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connection Connection	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	nt	✓ Meand	dering							
The ephemeral featur feature.	e is located	d within a	ravine in	mesic ha	irdwood fo	rest, with tree	s lining the b	anks. A second	d feature, sa	asb014e, flow	s into the
Measurements											
Depth of Water:	ft.	N/A 🗹	Unknov	wn□ W	ater Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Wi	dth: 2	ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	□Shel	ving	□Wrested ve	egetation	☑ Scouring		□Water	staining
(спеск ан тасарру)		ent, matte ing veget	,	□Wrad	ck line	☑ Litter and o	lebris	□Abrupt plan	t communit	y □Soil ch change	aracteristic
Dominant Substrate: (check all that apply)	□В€	edrock	□ Во	ulder	□ Cobb	le 🗆 G	ravel	☑ Sand	☐ Silt/ cl	lay 🗆	Organic
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es	1	No							
Vegetation Layers:	☑ Tr	ees	V (Saplings/	Shrubs	✓ Herbs					
Dominant Bank Vege Fraxinus nigra, Tilia a	tation (list mericana,	·): Pyrola ell	liptica, Ca	rex pedu	nculata, At	thyrium filix-fe	mina, Solida	go flexicaulis, S	Symphyotric	chum lateriflor	·um.
Aquatic Habitats (ex: Downed woody debris	submerged or s, overhanç	emerged aq ging bank	quatic vegetat and roots	tion, overhai S.	nging banks/ro	oots, leaf packs, la	rge submerged w	vood, riffles, deep po	pols, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste o	discharge pi	pes):					
Observation Notes: No water is present w	ithin the sv	vale.									



sasb013e_NE (across)



sasb013e_NW (downstream)



sasb013e_SE (upstream)

Description											
Project Name:						Date:			Waterbody	Survey ID:	
Line 5 Relocation Proj	ect					2019-10-07			sase019i		
State:		County	/Parish:			USGS Wate	erbody Name	e:			
WI		Ashland	d			UNT to Billy	Creek				
Company:		Crew M	lember Ini	tials:		Latitude:			Longitude:		
Enbridge		ARK/O	TG			46.390900			-90.770458		
Survey Type: (check one)	☐ Centerl	ine	☐ Re-Ro	oute	V	Access Road	□Facility	□Other			
	☐ River		✓ Stream	n		Ditch	☐ Swale	☐ Cana		Other	
	□ No Wa	ter	☑ Clear		1	Γurbid	☐Sheen o	n □Surfac	e Scum 🗆	Algal Mats	□Other
Existing Condition ^a :	☐ Highly	Function	nal Stream	n 🗆 N	Moderately	y Functional S	Surface Stream	Functionally	Impaired Str	eam	
Feature Description: (check one)	□ Natural		☐ Artifici	al, man-m	nade 🗹	Manipulated					
' '	□ Ephem	eral	✓ Interm	nittent		Perennial	☐ Conne	cting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	it	✓ Mean	dering							
Measurements											
Depth of Water: 0.5	_ ft.	N/A□	Unkno	wn 🗆 🛮 W	ater Edge	to Water Ed	lge: <u>4</u> ff	t. N/A□	OHWM Wid	th: <u>4</u>	ft.
OHWM Indicator:	Ľ CI	ear line	on bank	□Shelv	ving	□Wrested v	egetation	Scouring		□Water	staining
(check all that apply)		nt, matte		□Wrac	k line	□Litter and	debris	□Abrupt plan	t community	□Soil ch change	aracteristic
Dominant Substrate: (check all that apply)		edrock		oulder	□ Cobb	le 🗹 (Gravel	☑ Sand	☐ Silt/ cla		Organic
Observations											
Riparian Zone Presen	t : □ Ye	es		No							
Vegetation Layers: (check all that apply)	□ Tr	ees		Saplings/	Shrubs	✓ Herbs	3				
Dominant Bank Vege Phalaris arundinacea.	tation (list):									
Aquatic Habitats (ex: s None.	ubmerged or	emerged a	aquatic vegeta	ation, overhar	nging banks/re	oots, leaf packs, l	arge submerged	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms O None.	bserved ((list):									
Disturbances (ex: lives Run-off from road.	stock acces	s, manure	e in waterbo	dy, waste d	discharge pi	ipes):					
Observation Notes: None.											



sase019i_NW (downstream)



sase019i_SE (upstream)



sase019i_SW (across)

Waterbody Date	JIICEL										
Description											
Project Name:						Date:			Waterbody	y Survey ID:	
Line 5 Relocation Proj	ect					2019-09-26			sase010p		
State:		County/F	Parish:			USGS Wate	rbody Name:				
WI		Ashland				UNT to Billy	Creek				
Company:		Crew Me	ember Init	ials:		Latitude:			Longitude	:	
Enbridge		KDF/AR	K			46.388613			-90.77085	3	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	□ River		✓ Stream	1		Ditch	☐ Swale	☐ Canal	[☐ Other	
Water Appearance: (check one)	☐ No Wa	ter	✓ Clear		□Т	Turbid	□Sheen on Surface	□Surfac	e Scum	□Algal Mats	□Other
Existing Condition a: (check one)	☐ Highly	Function	al Stream	Y M	oderately	/ Functional S		Functionally	Impaired St	tream	
Feature Description:	✓ Natural		☐ Artificia	al, man-ma	ade 🗆 I	Manipulated					
Flow Regime:	□ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connect	ing			
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	☑ Meand	lering			Oware				
The ephemeral strean	i io iodatoc		10010 10100	i, wiii i oo	55 mmg (ino banko.					
Measurements											
Depth of Water: 0.25	<u>5</u> ft.	N/A□	Unknov	vn□ W a	ter Edge	to Water Ed	ge: <u>3</u> ft.	N/A□	OHWM Wi	dth: <u>5</u>	ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shelvi	ing	□Wrested v	egetation	☑ Scouring		□Water	staining
(check all that apply)		nt, matte		□Wrack	(line	☑ Litter and o	debris	□Abrupt plan change	t communit	y □Soil cl change	haracteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	□ Cobb	le 🗆 G	Gravel	☑ Sand	☐ Silt/ c	lay 🗆	Organic
Observations											
Riparian Zone Preser (check one)	it: 🗆 Ye	es		No							
Vegetation Layers: (check all that apply)	☑ Tr	ees	v (Saplings/S	Shrubs	✓ Herbs					
Dominant Bank Vege Betula papyrifera, Betu	ula allegha): niensis, ⁻	Tsuga car	adensis, [Oryopteris	s intermedia,	Acer sacchar	um, Fraxinus n	igra, Athyri	um filix-femir	na, Solidago
flexicaulis, Carex pedu Aquatic Habitats (ex: overhanging bank and		emerged aq wned wo	luatic vegetat ody debris	ion, overhang 3.	ging banks/ro	oots, leaf packs, la	irge submerged w	ood, riffles, deep po	pols, etc.):		
Aquatic Organisms C None.	bserved ((list):									
Disturbances (ex: live: None.	stock acces	s, manure	in waterboo	dy, waste dis	scharge pi	pes):					
Observation Notes: Feature continues out	side surve	y corridor	7.								



sase010p_E (across)



sase010p_N (downstream)



sase010p_S (upstream)

Waterbouy Data	Once									
Description										
Project Name:						Date:			Waterbody	Survey ID:
Line 5 Relocation Proje	ect					2019-09-06			sasb002e	
State:		County/F	Parish:			USGS Wate	body Name	•		
WI		Ashland				UNT to Billy	Creek			
Company:		Crew Me	ember Init	ials:		Latitude:			Longitude:	
Enbridge		MAL/SAI	M			46.387104			-90.770943	
Survey Type: (check one)	Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ River		□ Stream	1		Ditch	✓ Swale	☐ Canal		Other
Water Appearance: (check one)	☑ No Wa	ter	□ Clear		1	Γurbid	☐Sheen on Surface	Surfac	e Scum 🔲	Algal Mats □Other
Existing Condition a: (check one)	☐ Highly	Function	al Stream	⊻ Mod	derately	y Functional S		☐ Functionally	Impaired Stre	eam
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-mad	е 🗆	Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	☐ Intermi	ittent		Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	☑ Meand	lering						
Natural ephemeral swa	ale, some\	vhat eros	ional.							
Measurements										
Depth of Water:	_ft.	N/A ✓	Unknov	vn□ Wate	er Edge	e to Water Ed	ge: ft.	N/A	OHWM Widt	t h: 2 ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shelving	g	□Wrested v	egetation	☑ Scouring		□Water staining
(Check all that apply)		nt, matte		□Wrack li	ine	☑ Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□В€	edrock	□ Воι	ulder 🗆	Cobb	le 🗆 G	iravel	□ Sand	☑ Silt/ cla	y 🗆 Organic
Observations										
Riparian Zone Presen	it: 🗆 Ye	es	V 1	No						
Vegetation Layers: (check all that apply)	□ Tr	ees		Saplings/Shi	rubs	✓ Herbs				
Dominant Bank Veger Carex pedunculata. At	tation <i>(list</i> hrytium fili): x-femina	present o	n slopes.						
Aquatic Habitats (ex: s None.			uatic vegetat	tion, overhangin	g banks/ro	oots, leaf packs, la	rge submerged w	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms O None.	bserved ((list):								
Disturbances (ex: lives Erosion.	stock acces	s, manure	in waterboo	dy, waste disc	harge pi	ipes):				
Observation Notes: Small ephemeral swale	e feature v	vithin a m	nesic hard	wood forest	domina	ated by sugar	maple and b	asswood.		



sasb002e_N (upstream)



sasb002e_NW (across)



sasb002e_SW (downstream)

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbod	ly Survey ID:	
Line 5 Relocation Pro	ject					2019-09-25			sasc028e		
State:		County/	Parish:			USGS Wate	rbody Name):			
WI		Ashland	I			UNT to Billy	Creek				
Company:		Crew Mo	ember Ini	tials:		Latitude:			Longitude	9 :	
Enbridge		BRG/JS	SW			46.388681			-90.76758	35	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	☐ River		☐ Stream	n	V	Ditch	☐ Swale	☐ Canal		☐ Other	
Water Appearance: (check one)	✓ No War	ter	☐ Clear			Turbid	□Sheen or Surface	n □Surfac	e Scum	□Algal Mats	□Other
Existing Condition a: (check one)	□ Highly	Function	nal Stream		Moderatel	y Functional S		Functionally	Impaired S	Stream	
Feature Description: (check one)	☐ Natural		✓ Artificia	al, man-n	nade 🗆	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connec	ting			
Sinuosity within Survey Corridor: (check one)	☑ Straigh	t	☐ Meand	dering							
Description Notes: The feature is a ditch	adjacent to	a grave	l road.								
Measurements											
Depth of Water:	ft.	N/A 🗹	Unknov	wn□ V	Vater Edge	e to Water Ed	lge: ft.	N/A 🗹	онwм w	idth: 2	ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	□Shel	lving	□Wrested v	egetation	✓ Scouring		□Wate	r staining
		nt, matte		□Wra	ck line	□Litter and	debris	□Abrupt plan change	t communi	ty □Soil c change	characteristic
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	□ Cobb	ole 🗆 (Gravel	□ Sand	☑ Silt/ o	clay [∃ Organic
Observations											
Riparian Zone Prese	nt: 🗆 Ye	es	V 1	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/	/Shrubs	✓ Herbs					
Dominant Bank Vege Acer rubrum, Tilia am	etation <i>(list</i> ericana, Ul): mus ame	ericana, Fr	raxinus p	ennsylvan	ica, Cornus s	ericea, Acer	saccharum, Poa	a pratensis	s, Dactylis glo	omerata.
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overha	anging banks/r	roots, leaf packs, l	arge submerged v	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Runoff from gravel ro		s, manure	in waterboo	dy, waste	discharge p	ipes):					
Observation Notes: The feature is somew	hat eroded	, and is o	directly adj	jacent to	a treeline	and barbed v	rire fence.				



sasc028e_E (across)



sasc028e_N (downstream)



sasc028e_S (upstream)

Trate: Beay Bat	<u>u 01100t</u>										
Description											
Project Name:						Date:			Waterbody St	urvey ID:	
Line 5 Relocation Pro	ject					2019-09-25			sasc027e		
State:		County/	/Parish:			USGS Wate	erbody Name) :			
WI		Ashland	d			UNT to Billy	Creek				
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:		
Enbridge		BRG/JS	SW			46.388531			-90.766978		
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type: (check one)	☐ River		☑ Strean	n		Ditch	☐ Swale	☐ Cana	I 🗆 C	Other	
Water Appearance: (check one)	✓ No War	ter	☐ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum	lgal Mats □Other	
Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream		Moderatel (y Functional :		☐ Functionally	Impaired Strea	ım	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-		Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm			Perennial	☐ Connection Connection	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	✓ Meano	dering							
Measurements											
Depth of Water:	ft.	N/A 🗹	Unknov	wn 🗆 🛚 🕦	Water Edge	e to Water Ed	ige: ft.	. N/A	OHWM Width	: <u>1</u> ft.	
OHWM Indicator:	□ Cl	ear line	on bank	□She	elving	□Wrested v	egetation	☑ Scouring		□Water staining	
(check all that apply)		nt, matte ing vege		□Wra	ack line	□Litter and	debris	□Abrupt plar	t community	☐Soil characteristic change	
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☐ Cobb	ole 🗆 (Gravel	☐ Sand	 Silt/ clay	☐ Organic	
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es		No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	s/Shrubs	✓ Herbs	;				
Dominant Bank Vege Acer saccharum, Ulm											
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overh	anging banks/i	roots, leaf packs, l	arge submerged v	wood, riffles, deep p	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Runoff from sparsely	stock acces vegetated	s, manure wooded	in waterbooslopes.	dy, waste	e discharge p	oipes):					
Observation Notes: The feature is somew	hat erosior	nal in nat	cure, and th	he bank	s are spars	ely vegetated	. Waterbody	flows into sasc	026e.		



sasc027e_E (downstream)



sasc027e_N (across)



sasc027e_W (upstream)

Trate: Deay Bate	0000										
Description											
Project Name:						Date:			Waterbody St	ırvey ID:	
Line 5 Relocation Proje	ect					2019-09-25			sasc026e		
State:		County/P	arish:			USGS Wate	rbody Name	9 :			
WI		Ashland				UNT to Billy	Creek				
Company:		Crew Mei	mber Initi	ials:		Latitude:			Longitude:		
Enbridge		BRG/JSV	V			46.388894			-90.766694		
Survey Type: (check one)	☑ Centerl	ine [☐ Re-Rou	ıte	$\Box A$	Access Road	□Facility	□Other			
,	☐ River	[☑ Stream	l		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	☐ No Wat	ter (☑ Clear		□٦	Γurbid	☐Sheen o Surface	n □Surfac	e Scum 🗆 Al	gal Mats	□Other
Existing Condition ^a : (check one)	☑ Highly		l Stream	□ Mod	erately	y Functional S		☐ Functionally	Impaired Strea	m	
Feature Description: (check one)				ll, man-made		Manipulated					
Flow Regime: (check one)	☑ Ephem	eral [☐ Intermi	ttent		Perennial	☐ Connection Swale	cting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	t [☑ Meand	ering							
Measurements											
Depth of Water: 0.1	_ ft.	N/A□	Unknow	_{/n□} Wate	r Edge	to Water Ed	ge : <u>0.5</u> ft	N/A□	OHWM Width	: <u>2</u> ft.	
OHWM Indicator: (check all that apply)	□ CI	ear line or	n bank	□Shelving		□Wrested v	egetation	 Scouring		□Water st	taining
(спеск ан так арргу)		nt, matted		□Wrack lin	ne	□Litter and	debris	□Abrupt plan change	t community	□Soil cha	racteristic
Dominant Substrate: (check all that apply)		edrock	□ Bou	ılder 🗆	Cobb	le 🗆 (Gravel	□ Sand	☑ Silt/ clay		rganic
Observations											
Riparian Zone Presen	t: 🗹 Ye	es		lo							
Vegetation Layers: (check all that apply)	☑ Tr	ees	v s	Saplings/Shr	ubs	✓ Herbs					
Dominant Bank Veger Impatiens capensis, So	tation (list cirpus cyp): erinus, Sc	irpus hatt	orianus, Gly	ceria s	striata, Fraxin	us nigra, Ace	er nigra, Typha	X glauca.		
Aquatic Habitats (ex: s Overhanging vegetation	ubmerged or on.	emerged aqu	uatic vegetati	on, overhanging	banks/r	oots, leaf packs, la	arge submerged	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms O None.	bserved ((list):									
Disturbances (ex: lives None.	stock access	s, manure ir	n waterbod	ly, waste disch	narge pi	ipes):					
Observation Notes: The stream is somewh sometimes feeds it wa		al, althouţ	gh the dei	nse bank ve	getatio	on reduces ere	osion. The lo	w elevation of the	he stream mea	ns that the	wetland



sasc026e_E (across)



sasc026e_N (downstream)



sasc026e_S (upstream)

Waterbody Data Sile	<u> </u>						
Description							
Project Name:			Date:			Waterbody S	urvey ID:
Line 5 Relocation Project			2019-09-25			sasc025e	
State:	County/Parish:		USGS Water	body Name:			
WI	Ashland		UNT to Billy	Creek			
Company:	Crew Member Init	ials:	Latitude:			Longitude:	
Enbridge	BRG/JSW		46.388911			-90.763609	
Survey Type: (check one)	erline ☐ Re-Rou	ute □ <i>P</i>	Access Road	□Facility	□Other		
Waterbody Type: ☐ Rive	r ☑ Stream		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: ☐ No V (check one)	/ater ☑ Clear		Turbid	☐Sheen on Surface	□Surfac	e Scum □A	lgal Mats □Other
Existing Condition ^a : High (check one)	ly Functional Stream	✓ Moderately	/ Functional S	tream [Functionally	Impaired Strea	am
Feature Description: V Natu	ral 🗆 Artificia	I, man-made □ I	Manipulated				
Flow Regime:	emeral 🗆 Intermi	ttent 🗆 I	Perennial	☐ Connect Swale	ing		
Sinuosity within	ght 🗹 Meand	ering					
Measurements							
Depth of Water: 0.2 ft.	N/A□ Unknow	_{/n□} Water Edge	to Water Ed	ge: <u>2</u> ft.	N/A□	OHWM Width	n: <u>2</u> ft.
OHWM Indicator:	Clear line on bank	□Shelving	□Wrested ve	getation	☑ Scouring		□Water staining
<u> </u>	Bent, matted, or ssing vegetation	□Wrack line	□Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	Bedrock ☐ Bou	ılder 🗆 Cobb	le □ G	ravel	☑ Sand	□ Silt/ clay	☐ Organic
Observations							
	Yes 🗆 N	10					
Vegetation Layers:	Trees 🗆 S	Saplings/Shrubs	✓ Herbs				
Dominant Bank Vegetation (Phalaris arundinacea, Glyceria	ist): a striata, Carex crinita	, Tilia americana.					
Aquatic Habitats (ex: submerged Overhanging vegetation.		on, overhanging banks/ro	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	ools, etc.):	
Aquatic Organisms Observe None.	d (list):						
Disturbances (ex: livestock acc Runoff from paved road.	ess, manure in waterbod	ly, waste discharge pi	ipes):				
Observation Notes: The feature has thickly vegeta woodlands instead of the wetl	•	of reed canary gras	ss, and is asso	ociated with w	vetland wasc00	32e. Parts of th	ne feature border upland



sasc025e_E (across)



sasc025e_N (downstream)



sasc025e_S (upstream)

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbody	/ Survey ID:	
Line 5 Relocation Pro	ject					2019-09-25			sasc023e		
State:		County/F	Parish:			USGS Water	body Name	:			
WI		Ashland				UNT to Billy	Creek				
Company:		Crew Me	mber Initi	als:		Latitude:			Longitude:	<u> </u>	
Enbridge		BRG/JSV	N			46.388751			-90.760201	1	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Rou	te		Access Road	□Facility	□Other			
Waterbody Type:	☐ River	[✓ Stream			Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	✓ No Wat	ter I	□ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum 🗆	□Algal Mats	□Other
Existing Condition ^a :	□ Highly	Functiona	al Stream	☑ Mod	erately	y Functional S		☐ Functionally	Impaired St	ream	
Feature Description: (check one)	✓ Natural	[□ Artificia	l, man-made	. 🗆	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Intermit	tent		Perennial	☐ Connec Swale	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t I	☑ Meande	ering			<u> </u>				
Description Notes: The feature is a small collecting feature.	erosional s	stream tha	at leads in	to perennial	strear	m feature sasc	022p. The fe	eature starts at	the base of	a hill as a see	ep/runoff
Measurements											
Depth of Water:	ft.	N/A ✓	Unknow	n□ Water	Edge	e to Water Ed	ge: ft.	N/A 🗹	OHWM Wid	dth: <u>2</u> ff	i.
OHWM Indicator:	□ CI	ear line o	n bank	□Shelving		□Wrested ve	egetation	☑ Scouring		□Waters	staining
(check all that apply)		nt, matted	,	□Wrack lin	ie	□Litter and o	lebris	□Abrupt plan	t community	y □Soil cha change	aracteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Bou	lder 🗹	Cobb	ole □ G	ravel	☑ Sand	☐ Silt/ cl	lay 🗆 (Organic
Observations											
Riparian Zone Preser (check one)	nt: 🗆 Ye	es	V N	lo							
Vegetation Layers: (check all that apply)	☑ Tr	ees	□S	aplings/Shru	ıbs	☐ Herbs					
Dominant Bank Vege Thuja occidentalis, Be	etation (list etula allegh): aniensis,	Tilia amer	icana. Unde	rstory	vegetation is	very sparse o	due to disturbar	nce of the la	andscape.	
Aquatic Habitats (ex: None.	submerged or	emerged aqı	uatic vegetation	on, overhanging	banks/r	oots, leaf packs, la	rge submerged v	vood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Runoff from uphill pay	stock access red road, ru	s, manure i inoff from	n waterbod sparsely	y, waste disch vegetated slo	arge pi ope, h	ipes): ieavy worm ac	tivity.				
Observation Notes: The feature is highly e	erosional di	ue to distu	urbance to	the surroun	ding la	andscape and	increased ru	inoff.			



sasc023e_N (downstream)



sasc023e_S (upstream)



sasc023e_W (across)

Waterbody Data Silee						
Description						
Project Name:		D	Date:		Waterbody Sเ	ırvey ID:
Line 5 Relocation Project		2	2019-09-25		sasc022p	
State:	County/Parish:	U	JSGS Waterbody N	ame:		
WI	Ashland	E	Billy Creek			
Company:	Crew Member Initials:	L	.atitude:		Longitude:	
Enbridge	BRG/JSW	4	46.388868		-90.759932	
Survey Type: (check one)	rline Re-Route	□Acc	cess Road □Faci	lity □Other		
Waterbody Type: ☐ River (check one)	☑ Stream	□ Dit	itch 🗆 Sw	ale 🗆 Cana	I □ C	other
Water Appearance: ☐ No W (check one)	ater 🗹 Clear	□Tur	rbid □Shee Surfac		e Scum □Al	gal Mats □Other
Existing Condition a: Highl	y Functional Stream 🗹 I	Moderately F	Functional Stream	☐ Functionally	Impaired Strea	m
Feature Description: Natur (check one)	al ☐ Artificial, man-m	nade 🗆 Ma	anipulated			
Flow Regime:	meral 🗆 Intermittent	☑ Pe	erennial Swale	nnecting		
Sinuosity within ☐ Straig Survey Corridor: (check one)	ht 🗹 Meandering					
The feature is an erosional stre	<u></u>					
Measurements						
Depth of Water: 0.5 ft.	N/A□ Unknown□ W	/ater Edge to	o Water Edge: 5	ft. N/A□	OHWM Width	: <u>6</u> ft.
OHWM Indicator: (check all that apply)	Clear line on bank ☐Shel	lving	□Wrested vegetatio	n I Scouring		□Water staining
☑ E	ent, matted, or □Wrad sing vegetation	ck line	□Litter and debris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate:	Bedrock ☐ Boulder		☐ Gravel	☐ Sand	☐ Silt/ clay	□ Organic
Observations						
Riparian Zone Present: (check one)	′es v No					
Vegetation Layers:	rees □ Saplings/	/Shrubs	☐ Herbs			
Dominant Bank Vegetation (li Thuja occidentalis, Tsuga cana	densis, Betula alleghaniensis					
Aquatic Habitats (ex: submerged Riffles.		inging banks/root	ts, leaf packs, large subme	rged wood, riffles, deep p	ools, etc.):	
Aquatic Organisms Observed None.	(list):					
Disturbances (ex: livestock acce Runoff from nearby road, huma		discharge pipe	es):			
Observation Notes: The stream is located in a high road.	y disturbed forest, in a valley	/ between two	o steep slopes. The	stream runs into a	culvert underne	eath the nearby paved



sasc022p_N (downstream)



sasc022p_S (upstream)



sasc022p_W (across)

Tratorboay Bat	4 011000													
Description														
Project Name:						Date	:			1	Waterbody	Survey	ID:	
Line 5 Relocation Pro	ect					2019	9-09-25				sasc024e			
State:		County	/Parish:			USG	S Wate	rbody Name	9:	L				
WI		Ashland	d			UNT	to Billy	Creek						
Company:		Crew M	lember Ini	tials:		Latit	ude:				Longitude:			
Enbridge		BRG/JS	SW			46.3	89523				-90.759793			
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Ro	ute		Acces	s Road	□Facility		Other				
Waterbody Type:	□ River		☐ Strean	n		Ditch		☐ Swale		Canal		Other		
Water Appearance: (check one)	☐ No Wat	ter	☐ Clear			T urbid		☐Sheen or	n 🗆	Surface	e Scum 🗆	Algal N	∕lats □	Other
Existing Condition ^a : (check one)	□ Highly	Function	nal Stream	n 🗆	Moderate	ely Fund	ctional S	Surface Stream	⊈ Functi	onally I	mpaired Str	eam		
Feature Description: (check one)	☐ Natural		✓ Artificia	al, man-	made [□ Manip	ulated							
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perer	nial	☐ Connection Connection	cting					
Sinuosity within Survey Corridor: (check one)	☑ Straigh	t	☐ Meand	dering										
Description Notes: The feature is a small perennial waterbody s		litch. Th	e banks ar	e thickly	/ vegetate	d with a	ı small r	iparian fringe	e, and so	me wat	er runs from	the fea	ature dow	n into
Measurements														
Depth of Water: 0.1	ft.	N/A□	Unknov	wn□	Water Ed	ge to W	ater Ed	l ge: 1 ft.	:. N	N/A□	OHWM Wid	th:	<u>2</u> ft.	
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	□She	elving	□Wı	ested v	egetation	□Scot	ıring		□W	/ater stain	ing
(спеск ан тасарру)		nt, matte		□Wra	ack line	□Lit	ter and	debris	□Abru change		t community	□S cha	oil charact	teristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	□ Cot	oble		Gravel	☑ San	d	☐ Silt/ cla	ny	□ Orga	anic
Observations														
Riparian Zone Preser	nt: 🗆 Ye	es	V	No										
Vegetation Layers: (check all that apply)	□ Tr	ees		Saplings	s/Shrubs	Į.	1 Herbs							
Dominant Bank Vege Phalaris arundinacea	tation (list Scirpus cy): /perinus	, Juncus e	ffusus, F	Rumex cri	spus.								
Aquatic Habitats (ex: Overhanging vegetati	submerged or On.	emerged a	aquatic vegeta	tion, overh	nanging bank	s/roots, lea	af packs, l	arge submerged v	wood, riffles	s, deep po	ools, etc.):			
Aquatic Organisms (None.	Observed ((list):												
Disturbances (ex: live Runoff from paved roa	stock access ad.	s, manure	e in waterbo	dy, waste	e discharge	pipes):								
Observation Notes: The water has very lit	tle flow, an	d as suc	ch provides	s some a	aquatic ha	abitat. Ti	ne featu	ire collects st	tormwate	er runoff	f.			



sasc024e_E (upstream)



sasc024e_N (across)



sasc024e_W (downstream)

Linear Waterbody Data Sheet

Survey Description	n										
Project Name:		Waterbody Nai	ne:			W	aterbody ID:			Date:	
Line 5 Relocation Projec	t	Billy Creek				sa	sw015			10/5/2019	
State:	County:		Company:			Crew N	Member Initials	: Pł	notos:		
WI	Ashland		West			ES, W	С	78	396,98-	99	
Tract Number(s):	I		Nearest Mile	post			Associated W	etland IE)(s):		
WI-AS-165.001			18.7				wasw034f				
Survey Type: (check one)	☐ Centerlin	ne □Re-F	Route	⊠Aco	ess Road		□Other:				
Physical Attributes	S										
Stream Classification:		rol □Into	mittent	⊠ Do	ennial						
,	☐ Epheme	iai 🗆 iiilei	millent	△ F € I	ennai						
Waterbody Type: (check one)	River ⊠ St	ream 🗆 Dit	ch 🗆 C	Canal	□ Othe	er:					
OHWM	OHWM Indica	ator:									
Width: 8ft.	(check all that app	ly)	☐ Clear lir on bank	ne	⊠Shelvinç	9	⊠Wrested vegetation	⊠S	couring	g □Water staining	
Height: ft. N/A□	□Ben vegeta	t, matted, or miss	ing □Wra	ck line	□Litter ar debris	nd	□ Abrupt plant community cha		oil cha	racteristic change	
Width of Waterbody - T Bank to Top of Bank:		of Waterbody -	Toe of Slope	Width o		ody - W	ater Edge to	Depth of	Water	:	
	10.100	•	_	Trate:	•			,		0:- 4	
<u>18</u> _ft.		15	ft.	N/A□		<u>6</u> f	t.	N/A□	_	<u>8in</u> ft.	
Sinuosity:		velocity:		Bank h	eight			Bank slo	ре		
(check one) ☐ Straight	(Approx.)			Right:				Right		
		<u> </u>	os		Left:	3.5	_tt.		Left	degre	es
⊠Meanderin	ng N/A□					4	ft.			80 degre	es
Qualitative Attribu	tes										
Water Appearance:	l										
(check one)	No water □	Clear ⊠Turb	-	een urface	□Sur sc	tace um	□ Algal mats	□Other:			
	Bedrock ☐ Bo	oulder Cobb	le 🛭 Grav	el 🛛	Sand D	☑ Silt/ c	lay 🗆 Organi	с 🗆 О	ther:		
(check all that apply) % of Substrate:	<u></u> %	<u></u> %	% <u>15</u>	%	70 %	15	%9	6	%		
Width of Binarian Zana	. Voqetativ	e Layers:									
Width of Riparian Zone	(check all the		□Trees	:	☐ Sapl	ings/Sh	rubs:	☐ Herbs	3		
ft. N/A⊠	Avg. DBH	of Dominants:	16		_	-	_in	ir	٦.		
Dominant Bank Vegeta	,										
Juniperus virginiana, Be	tula alleghaniensi	s, Equisteum arv	ense, Carex b	romoide	S						
Aquatic Habitats (ex: su	ıbmerged or emerge	ed aquatic vegetatio	n, overhanging	banks/roo	ots, leaf pack	ks, large	submerged wood	, riffles, de	ep pools	s):	
Log jams, leaf packs, lar	ge wood										
Aquatic Organisms Ob	served (list):										
Ranid frog, Lithobates ci	lamitans or catesl	beianus									
T&E Species Observed	(list):										
Disturbances (ex: livesto	ock access, manure	in waterbody, waste	e discharge pipe	es):							
Mowed vegetation and e	rosion along overh	nead utility corrido	r								
Waterbody is: (check one)		□ Art	ificial, man-m	ade	☐ Manipu	ulated					
Stream Quality ^a : (check one)	☐ High	⊠ Mo	oderate		□ Low						

а	High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.
ı	Notes:
,	Naterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

Waterbody ID: sasw015

sasw015





sasw015



APPENDIX F

Waterbody Data Sheets
Part 12 of 24

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbody	/ Survey ID:	
Line 5 Relocation Pro	ject					2019-09-18			sase001p		
State:		County/	Parish:			USGS Wate	rbody Name:				
WI		Ashland				UNT					
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude:	:	
Enbridge		KDF/AR	RK			46.372067			-90.72782		
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	☐ River		✓ Stream	n		Ditch	☐ Swale	☐ Canal		☐ Other	
Water Appearance: (check one)	□ No Wa	ter	✓ Clear		□Т	Turbid	☐Sheen on Surface	□Surfac	e Scum [□Algal Mats	□Other
Existing Condition ^a : (check one)	☑ Highly	Function	al Stream		/loderately	y Functional S		☐ Functionally	Impaired St	ream	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-m	ade 🗆 l	Manipulated					
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connect Swale	ing			
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Meano	dering							
Description Notes: The perennial stream	is located	within a h	nardwood	swamp, v	vith trees a	and shrubs lir	ing the bank.				
Measurements											
Depth of Water: 0.5	ft.	N/A□	Unknov	wn□ W	ater Edge	to Water Ed	ge: <u>3</u> ft.	N/A□	OHWM Wie	dth: <u>5</u> ft	·-
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	□Shel\	/ing	□Wrested v	egetation	☑ Scouring		□Waters	taining
		nt, matte		□Wrac	k line	Litter and	debris	□Abrupt plan	t community	y □Soil cha change	aracteristic
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	□ Cobb	le 🗆 C	Gravel	☑ Sand	☐ Silt/ cl	lay 🗆 (Organic
Observations											
Riparian Zone Preser	nt: 🗹 Ye	es		No							
Vegetation Layers:	☑ Tr	ees		Saplings/	Shrubs	✓ Herbs					
Dominant Bank Vege The dominant bank ve	etation (list) <u>:</u> Thuja o	ccidentalis	s, Corylus	cornuta, a	and Matteucc	a struthiopter	is.			
Aquatic Habitats (ex: Downed woody debris	submerged or s, rock piles	emerged ad	quatic vegeta	tion, overhan	nging banks/ro	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	ools, etc.):		
Aquatic Organisms (Aquatic invertebrates	Observed ((list):									
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste d	lischarge pi	ipes):					
Observation Notes: Feature is associated	with a fore	sted wet	land (was	e002f).							



sase001p_NE (upstream)



sase001p_SE (across)



sase001p_W (downstream)

Tratorboay Bat	4 011000											
Description												
Project Name:						Da	ite:			Waterbody	Survey ID:	
Line 5 Relocation Pro	ject					20	19-09-19			sase002e		
State:		County/	/Parish:			US	GS Water	body Name	:			
Wisconsin		Ashland	t			U	NT to Silve	r Creek				
Company:		Crew M	ember Ini	tials:		La	titude:			Longitude:		
ONEOK		KDF/AF	RK			46	3.371921			-90.724004		
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Ro	ute		Acc	ess Road	□Facility	□Othe	er		
Waterbody Type: (check one)	□ River		✓ Strear	n		Dito	h	☐ Swale	☐ Car	nal 🗆	Other	
Water Appearance: (check one)	✓ No Wat	ter	☐ Clear			∃Turk	oid	☐Sheen on	n □Surf	ace Scum 🗆	Algal Mats	□Other
Existing Condition a: (check one)	□ Highly	Function	nal Stream	V	Moderate	ely Fι	unctional S	Surface tream	☐ Functional	ly Impaired Str	eam	
Feature Description:	✓ Natural		☐ Artifici	al, man-	-made 🗆	∃ Maı	nipulated					
Flow Regime: (check one)	E Ephem	eral	☐ Interm	ittent		□ Per	ennial	☐ Connec	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	☑ Meand	dering				Swale				
erosion.												
Measurements												
Depth of Water:	ft.	N/A 🗹	Unkno	wn□	Water Edg	ge to	Water Ed	ge: ft.	N/A	OHWM Wic	lth: 2	ft.
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	□Sh	elving		Wrested ve	getation	☑ Scouring		□Water	r staining
, , , , , , , , , , , , , , , , , , , ,		nt, matte ing vege		□Wr	ack line		Litter and o	lebris	□Abrupt pl	ant community	□Soil cl change	haracteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	☑ Bo	ulder	□ Cob	oble	□ G	ravel	☐ Sand	I Silt/ cla	ay 🗆	Organic
Observations												
Riparian Zone Preser (check one)	nt: 🗆 Ye	es		No								
Vegetation Layers: (check all that apply)	☑ Tr	ees	V	Sapling	s/Shrubs		✓ Herbs					
Dominant Bank Vege The dominant bank ve	etation (list egetation is): Fraxinu	ıs nigra, A	thyrium	filix-femina	a, an	d Mitchella	repens.				
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overh	hanging banks	s/roots,	, leaf packs, la	rge submerged v	wood, riffles, deep	pools, etc.):		
Aquatic Organisms (None.	Observed ((list):										
Disturbances (ex: live None.	stock acces	s, manure	in waterbo	dy, waste	e discharge	pipes):					
Observation Notes: Feature is fed by an e	phemeral s	stream (s	sase003e)	i.								



sase002e_E (downstream)



sase002e_N (across)



sase002e_S (upstream)

waterbody bate	a Sileet										
Description											
Project Name:						Date:			Waterbody	y Survey ID:	
Line 5 Relocation Pro	ect					2019-09-19			sase003e		
State:		County/F	Parish:			USGS Water	body Name	: :			
Wisconsin		Ashland				UNT to Silve	r Creek				
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude	:	
Enbridge		KDF/ARI	K			46.371907			-90.723766	6	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type: (check one)	□ River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		☐ Other	
Water Appearance:	☑ No Wa	ter	□ Clear		ПΤ	urbid	☐Sheen on Surface	□Surfac	e Scum	□Algal Mats	□Other
Existing Condition a: (check one)	□ Highly	Function	al Stream	Y M	oderately	Functional S		☐ Functionally	Impaired St	tream	
Feature Description:	✓ Natural		☐ Artificia	al, man-ma	ade 🗆 I	Manipulated					
Flow Regime: (check one)	E Ephem	eral	☐ Interm	ittent		Perennial	☐ Connect	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	it	☑ Meand	dering							
Description Notes: The ephemeral strear line the bank.	n is located	d in a ravi	ne within	a northern	mesic fo	rest. The stre	am connects	to sase002e a	nd discharç	ges into nearb	y river. Trees
Measurements											
Depth of Water:	ft.	N/A 🗹	Unknov	wn□ Wa	ter Edge	to Water Ed	ge: ft.	N/A	OHWM Wi	dth: <u>1</u> f	t.
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shelvi	ng	□Wrested ve	egetation	✓Scouring		□Waters	staining
		ent, matted ing vegeta		□Wrack	line	☑ Litter and o	lebris	□Abrupt plan change	t communit	y □Soil cha change	aracteristic
Dominant Substrate: (check all that apply)	□Ве	edrock	🗹 Во	ulder	☐ Cobb	le 🗆 G	ravel	□ Sand	☑ Silt/ cl	lay 🗆 🖯	Organic
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es	<u> </u>	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees	v (Saplings/S	hrubs	☑ Herbs					
Dominant Bank Vege Fraxinus nigra, Athyrid	tation (list um filix-fem	i): nina, and	Carex pe	dunculata.							
Aquatic Habitats (ex: Downed woody debris	submerged or S.	emerged aq	uatic vegetat	tion, overhang	jing banks/ro	oots, leaf packs, la	rge submerged w	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live None.	stock acces	s, manure i	in waterboo	dy, waste dis	scharge pi	pes):					
Observation Notes: No water currently pre	esent.										



sase003e_E (downstream)



sase003e_S (upstream)



sase003e_W (across)

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbod	y Survey ID:	
Line 5 Relocation Pro	ject					2019-09-19			sase004p		
State:		County/l	Parish:			USGS Wate	rbody Name	: :			
Wisconsin		Ashland				Silver Creek					
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude) :	
ONEOK		KDF/AR	K			46.371407			-90.72267	78	
Survey Type: (check one)	✓ Center	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	☐ River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		☐ Other	
Water Appearance: (check one)	□ No Wa	ter	☑ Clear		□Т	urbid	□Sheen on Surface	□Surfac	e Scum	□Algal Mats	□Other
Existing Condition ^a : (check one)	☑ Highly	Function	al Stream	□ M	loderately	/ Functional S		☐ Functionally	Impaired S	tream	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-ma	ade 🗆 I	Manipulated					
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	Ø	Perennial	☐ Connec	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	✓ Meand	dering							
Measurements											
Depth of Water: 1	ft.	N/A□	Unknov	wn 🗆 Wa	ater Edge	to Water Ed	ge: <u>10</u> ft.	N/A□	OHWM W	idth: <u>14</u>	ft.
OHWM Indicator:	□ Cl	ear line o	on bank	□Shelv	ing	□Wrested v	egetation	☑ Scouring		□Water	staining
(check all that apply)		nt, matte ing veget		□Wrack	k line	Litter and	debris	□Abrupt plan change	t communi	ty □Soil ch change	naracteristic
Dominant Substrate: (check all that apply)	☑ Be	edrock	□ Во	ulder	☐ Cobb	le 🗆 🤆	Gravel	☑ Sand	☐ Silt/ o	clay 🗆	Organic
Observations											
Riparian Zone Prese	nt: 🗹 Ye	es		No							
Vegetation Layers:	☑ Tr	ees	v :	Saplings/S	Shrubs	☑ Herbs					
Dominant Bank Vege The dominant bank ve Cardamine pensylvar	egetation is): Fraxinus	s nigra, Be	etula allegl	haniensis	, Myosoton s	corpioides, S	ymphyotricum I	ateriflorum	ı, Solanum du	lcamara, and
Aquatic Habitats (ex: Overhanging banks/ro		emerged ac pools.	quatic vegetal	tion, overhanç	ging banks/ro	oots, leaf packs, la	arge submerged v	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms (Frogs, aquatic inverte	Observed (brates.	(list):									
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste di	ischarge pi	pes):					
Observation Notes: Narrow fringe wetland	l is present	, but no f	iloodplain	was mapp	oed.						



sase004p_E (downstream)



sase004p_N (across)



sase004p_W (upstream)

Waterbody Data	Once									
Description										
Project Name:						Date:			Waterbody S	Survey ID:
Line 5 Relocation Proje	ect					2019-10-17			sasa071p	
State:		County/	Parish:			USGS Wate	rbody Name):		
WI		Ashland	I			UNT to Silve	r Creek			
Company:		Crew Me	ember Init	ials:		Latitude:			Longitude:	
Enbridge		BRG/DC	GL			46.373815			-90.712906	
Survey Type: (check one)	☐ Centerl	ine	☐ Re-Ro	ute	V	Access Road	□Facility	□Other		
Waterbody Type: (check one)	☑ River		☐ Stream	1		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: [□ No Wa	ter	☑ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum 🗆 🛭	Algal Mats □Other
Existing Condition a: (check one)	Highly	Function	nal Stream	□ Mod	erately	y Functional S		☐ Functionally	Impaired Stre	am
Feature Description: (check one)	☐ Natural		☐ Artificia	al, man-made		Manipulated				
Flow Regime: [check one]	☐ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connec	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Meand	lering						
Measurements										
Depth of Water: 1	_ft.	N/A□	Unknov	vn□ Wate	r Edge	e to Water Ed	ge: <u>12</u> ft.	. N/A□	OHWM Widt	h: <u>12</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	□Shelving	ı	☑ Wrested v	egetation	☑ Scouring		□Water staining
(oncon an true apply)		nt, matte		□Wrack liı	ne	□Litter and	debris	□Abrupt plan	t community	□Soil characteristic change
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder 🗆	Cobb	le 🗆 C	Gravel	 Sand	☐ Silt/ clay	/ □ Organic
Observations										
Riparian Zone Present (check one)	: V Ye	es	1	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	(Saplings/Shr	ubs	☑ Herbs				
Dominant Bank Veget Alnus incana, Tilia ame	ation <i>(list</i> ericana, A): cer rubru	ım, Fraxinı	us nigra, Car	ex crir	nita, Solidago	gigantea, Gly	yceria striata.		
Aquatic Habitats (ex: st Woody debris, pools.			quatic vegetat	ion, overhanging	banks/r	oots, leaf packs, la	irge submerged v	wood, riffles, deep po	ools, etc.):	
Aquatic Organisms On None.	bserved ((list):								
Disturbances (ex: lives Runoff from gravel road		s, manure	in waterboo	dy, waste disch	narge pi	ipes):				
Observation Notes: The feature runs through	gh severa	l culverts	s, and is fa	st-flowing. S	everal	rain events o	ocurred in the	e days prior to s	survey.	



sasa071p_N (downstream)



sasa071p_S (upstream)



sasa071p_W (across)

Waterbody Data Si	icci							
Description								
Project Name:				Date:			Waterbody S	urvey ID:
Line 5 Relocation Project				2019-10-17	•		sasa070e	
State:	Coun	y/Parish:		USGS Wat	erbody Name	:		
WI	Ashla	nd		None				
Company:	Crew	Member Initi	als:	Latitude:			Longitude:	
Enbridge	BRG/	DGL		46.375348			-90.709502	
Survey Type: ☐ C	enterline	☐ Re-Rou	te	✓ Access Road	□Facility	□Other		
Waterbody Type: ☐ R	iver	☑ Stream		☐ Ditch	☐ Swale	☐ Canal		Other
Water Appearance: ☐ N (check one)	o Water	☑ Clear		□Turbid	□Sheen or Surface	n □Surfac	e Scum □A	lgal Mats □Other
Existing Condition ^a :	lighly Functi	onal Stream	✓ Modera	tely Functional		☐ Functionally	Impaired Strea	am
Feature Description: ☐ N (check one)	atural	☐ Artificial	l, man-made	✓ Manipulated				
Flow Regime: 🗹 E	phemeral	☐ Intermit	tent	☐ Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor:	traight	☑ Meande	ering					
Measurements								
Depth of Water: 0.2 ft.	N/A□	Unknow	n	dge to Water E	dge: <u>2</u> ft.	N/A□	OHWM Width	n: <u>3</u> ft.
OHWM Indicator: (check all that apply)	☐ Clear lin	e on bank	□Shelving	□Wrested	/egetation	☑ Scouring		□Water staining
(Greek all that apply)	☑Bent, ma missing ve		□Wrack line	□Litter and	debris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	☐ Bedrock	□ Bou	lder □ Co	obble \Box	Gravel	□ Sand	坚 Silt/ clay	□ Organic
Observations								
Riparian Zone Present:	☐ Yes	☑ N	lo					
Vegetation Layers: (check all that apply)	✓ Trees	☑ S	aplings/Shrubs	☑ Herb	3			
Dominant Bank Vegetatio Acer saccharum, Tilia ame	n <i>(list)</i> : ricana, Rub	us idaeus, Ca	rex gracillima, (Carex peduncu	ata, Fraxinus	americana.		
Aquatic Habitats (ex: submer Pools.	rged or emerge	d aquatic vegetation	on, overhanging ban	nks/roots, leaf packs,	large submerged v	wood, riffles, deep po	ools, etc.):	
Aquatic Organisms Obser None.	rved (list):							
Disturbances (ex: livestock Runoff from gravel road.	access, manu	ire in waterbody	y, waste discharg	e pipes):				
Observation Notes: Outside of the survey area, young forest.	, the stream	is associated	l with a wetland	l feature around	the banks. Th	ne feature origir	nates from a co	ulvert and runs into a



sasa070e_NE (across)



sasa070e_NW (downstream)



sasa070e_SE (upstream)

Trato. Body Bate	. 011000													
Description														
Project Name:						D	Date:			Wate	rbody S	urvey ID:		
Line 5 Relocation Proj	ect					2	2019-09-21			sase	005p			
State:		County/	Parish:			U	JSGS Wate	rbody Name	e :					
WI		Ashland	i			ι	JNT to Silve	er Creek						
Company:		Crew M	ember Ini	tials:		L	.atitude:			Long	itude:			
Enbridge		KDF/AR	RK			4	16.364877			-90.707534				
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		□Ac	cess Road	□Facility	□Oth	er				
· · ·	□ River		✓ Stream	n		□ Di	tch	☐ Swale	□ Ca	nal		Other		
Water Appearance: (check one)	☐ No Wat	er	☑ Clear			□Tu	rbid	☐Sheen o	on □Sui	face Scu	ım □A	lgal Mats	□Other	
Existing Condition ^a : (check one)	☑ Highly	Function	nal Stream	n [Modera	tely F	unctional S	Surface Stream	☐ Functiona	Illy Impair	red Strea	ım		
Feature Description: (check one)			☐ Artifici				anipulated							
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent		☑ P∈	erennial	☐ Conne	cting					
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	☑ Meand	dering										
Measurements														
Depth of Water: 1	_ft.	N/A□	Unknov	wn□	Water Ed	dge t	o Water Ed	ge : <u>8</u> f	t. N/A	OHW	M Width	i: <u>9</u> 1	ft.	
OHWM Indicator: (check all that apply)	☑ CI	ear line	on bank	□Sh	elving		□Wrested v	egetation	☑Scouring	9		□Water	staining	
(oncon an ana apply)		nt, matte		□Wr	rack line	[Litter and	debris	□Abrupt p	lant com	munity	□Soil ch change	aracteristic	
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	□ Со	bble	V (Gravel	☑ Sand		Silt/ clay		Organic	
Observations														
Riparian Zone Presen	it: 🗹 Ye	es		No										
Vegetation Layers: (check all that apply)	☑ Tr	ees		Sapling	s/Shrubs	i	✓ Herbs							
Dominant Bank Vege The dominant bank ve	tation (list getation is): Acer sa	ccharum,	Tilia am	nericana,	Matt	euccia strut	hiopteris, ar	nd Brachyelyt	rum erec	tum.			
Aquatic Habitats (ex: s Downed woody debris	submerged or , riffles, ov	emerged a erhangir	quatic vegeta ng roots ar	ition, overl nd vege	hanging ban etation.	iks/root	ts, leaf packs, la	arge submerged	wood, riffles, dee	ep pools, etc	E.)I			
Aquatic Organisms O Aquatic invertebrates.	bserved (list):												
Disturbances (ex: lives None.	stock acces	s, manure	in waterbo	dy, waste	e discharg	e pipe	es):							
Observation Notes: None.														



sase005p_E (across)



sase005p_N (upstream)



sase005p_S (downstream)

Survey Description	1							
Project Name:		Waterbody Nan	ne:		W	aterbody ID:		Date:
Line 5		Unnamed tributa	ary to Silver C	reek	SA	ASV002e		9/20/2019
State:	County:		Company:		Crew N	Member Initials	: Photo	os:
	Ashland		VHB		CS, CC		3 (US	, DS, CS)
Tract Number(s):			Nearest Mile	post		Associated W	etland ID(s):	
WI-AS-189.000			21.20			WASV014, WA	ASV015	
Survey Type: (check one)	□ Centerline	e □Re-R	Route	□Access Road		□Other:		
Physical Attributes	S							
Stream Classification: (check one)	⊠ Ephemer	al □Interi	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	ch □ C	Canal 🗆 Othe	er:			
OHWM Width:	OHWM Indica (check all that apply		☐ Clear lin	e □Shelvinç	g	□Wrested vegetation	□Scou	ring ⊠Water staining
Height: _1 in. N/A□	□Bent, vegetat	matted, or missi ion	ng □Wrad	ck line □Litter ar debris	nd	□Abrupt plant community cha		characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - 1 of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		Depth of Wa (Approx.)	ater:
_ <u>5_</u> ft.		<u>4</u> ft.		N/A⊠	ft.		N/A⊠	<u>in</u> .
Sinuosity: (check one) ⊠ Straight □ Meanderin	(Approx.)	velocity: fps		Left:	<u>2</u> ft. <u>2</u> ft.			ght:
Qualitative Attribut	tes							-
Water Appearance:		Clear □Turbi	-		face um	□Algal [mats	□Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock	ulder ⊠ Cobbl % <u>80</u> %		el □ Sand □ %	□ Silt/ c %	, ,		: 6
Width of Riparian Zone 100 ft. N/A□	(check all that	•	⊠ Trees: 12_in.		ings/Sh 2_in.	rubs:	⊠ Herbs in.	
Dominant Bank Vegeta Carex scabrata, Acer sad	tion (list):	n feliv-femina						
Aquatic Habitats (ex: su			n, overhanging l	banks/roots, leaf pacl	ks, large	submerged wood	, riffles, deep p	pools):
None								
Aquatic Organisms Obs	served (list):							
T&E Species Observed	(list):							
None								
Disturbances (ex: liveston None	ck access, manure i	n waterbody, waste	discharge pipe	es):				
Waterbody is: (check one)		☐ Arti	ificial, man-ma	ade 🗆 Manipu	ulated			
Stream Quality ^a : (check one)	⊠ High	□ Мо	derate	□ Low				

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

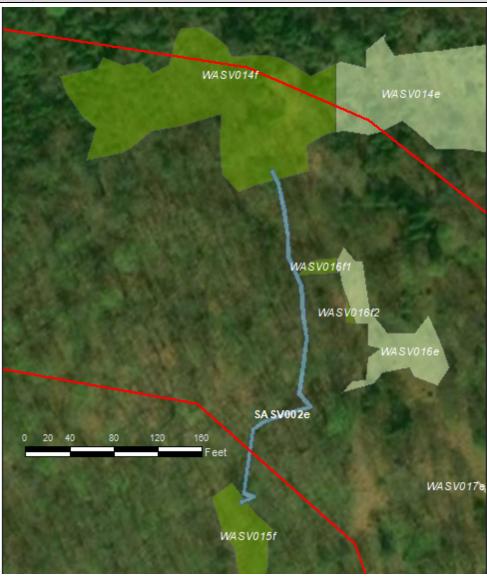
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Feature is an ephemeral stream originating from WASV015f and draining down to WASV014f. Rock and gravel substrate is present in channel with small pools of standing water present.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Linear Waterbody Point Photographs Line 5 Wetland Delineation September 20, 2019, Page 1 of 2



Photograph 1: SASV002e, North, Across stream



Photograph 2: SASV002e, West, Upstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 20, 2019, Page 2 of 2



Photograph 3: SASV002e, East, Downstream

Context one)	Survey Descriptio	n										
State: County: Company: Crew Member Initials: Photos: Ashland VHB CS, CC 3 (US, DS, CS) Tract Number(s): Nearest Milepost Associated Wetland ID(s): None Survey Type: None Contentine Fire-Route			Waterbo	dy Name:				W	aterbody ID:			Date:
Ashland	Line 5		Unname	d tributary t	o Silver C	reek		S	ASV003p			9/21/2019
Tract Number(s): Wh.A5-19.0000 21.10 None Streey Type:	State:	County:		Cor	mpany:			Crew I	Member Initials	S:	Photos:	
Survey Type:	Wisconsin	Ashland		VHE	3			CS, CC		;	3 (US, D	S, CS)
Survey Type: Centerline	Tract Number(s):			Nea	arest Mile	post			Associated W	etland	ID(s):	
Physical Attributes Ephemeral Intermittent Sperennial Water National Other:				21.′	10				None			
Physical Attributes Stream Classification: Ephemeral Intermittent Perennial		⊠ Ce	enterline	□Re-Rout	e	ПАс	cess Road		□Other:			
Ephemeral Intermittent Perennial Materbody Type: Concect one) River Stream Ditch Canal Other:												
Check one)		□ Ер	hemeral	□Intermitte	ent	⊠Pe	erennial					
Width:	Waterbody Type: (check one)	∃River	⊠ Stream	☐ Ditch		Canal	☐ Othe	er:				
Corect all final rappity Corect all final ra	OHWM	онум	Indicator:									
Vegetation Veg	Width:					ne	□Shelvin	g			Scouring	
Width of Waterbody - Top of Bank to	<u>1 in</u> .		, ,	or missing	□Wra	ck line		nd			Soil cha	racteristic change
Bank to Top of Bank: Bank to Top of Slope: Bank to Top of Bank: Bank top of Bank top o		For of h	A!! .!!! - C \A!- !!	- t- T	- (0)	\A/: al4la	of Watarb	- d \A/	latar Edma ta	Danth	of Water	
Straight Straight Agprox. Straight Agprox. Straight Agprox. Straight Agprox. Straight Agprox. Again					or Stope	Water	Edge:	ouy - vv	ater Euge to			·-
Straight	<u>8</u> ft.		_	<u>5.5</u> ft.		N/A□	_	<u>5.5</u> ft.		N/A□		<u>1-3 in</u> .
Straight						Bank	height			Bank s	lope	
Meandering N/A		(.	Approx.)				Right:				Right	
Qualitative Attributes Water Appearance: (check one) No water ⊗Clear □Turbid Sheen on surface Surface □Algal □Other: mats Substrate: (check one) □ Bedrock □ Bedrock □ Boulder □ Cobble □ Gravel □ Sand □ Silt/ clay □ Organic □ Other: (check all that apply) ○ Substrate: □ Sand □ Silt/ clay □ Organic □ Other: (check all that apply) ○ Of Substrate: □ Sapplings/Shrubs: □ Herbs □ Sapplings/Shrubs: □ Herbs □ Sapplings/Shrubs: □ Sapp	, and the second		_	<u>1_fps</u>			l eft	<u>4</u> ft.			Left	
Water Appearance:	⊠Meanderi	ng N	N/A□				20	<u>4</u> ft.				
Water Appearance:	Qualitative Attribu	ites										
Substrate: Bedrock Boulder Cobble Gravel Sand Silt/ clay Organic Other:												
Coheck all that apply % of Substrate:	(check one)	□No water	⊠Clear	□Turbid	_				3	□Othei	r:	
% of Substrate: %		Bedrock	☐ Boulder ⊠	Cobble	⊠ Grav	el 🛭	Sand [□ Silt/ c	lay 🗆 Organi	ic 🗆	Other:	
Check all that apply)		%	%	<u>60</u> %	<u>30</u> %		<u>10 </u> %	%	%		%	
Check all that apply)	Width of Riparian Zone	e: Veq	etative Layers:									
N/A (approx.) Dominant Bank Vegetation (list): Carex bromoides, Impatiens capensis, Symphyotrichum lateriflorum Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, overhanging banks, logs in stream, riffles, pools Aquatic Organisms Observed (list): Coleoptera, Plecoptera T&E Species Observed (list): None Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Livestock access, cow pasture Waterbody is: (check one)	-	(chec				:	⊠ Sap	lings/Sh	rubs:	⊠ Her	bs	
Dominant Bank Vegetation (list): Carex bromoides, Impatiens capensis, Symphyotrichum lateriflorum Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, overhanging banks, logs in stream, riffles, pools Aquatic Organisms Observed (list): Coleoptera, Plecoptera T&E Species Observed (list): None Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Livestock access, cow pasture Waterbody is: (check one)				nants:	<u>5</u> in.		_	<u>2</u> in.	-	i	n.	
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, overhanging banks, logs in stream, riffles, pools Aquatic Organisms Observed (list): Coleoptera, Plecoptera T&E Species Observed (list): None Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Livestock access, cow pasture Waterbody is: (check one)		ation (list):	<u>, </u>									
Leaf packs, overhanging banks, logs in stream, riffles, pools Aquatic Organisms Observed (list): Coleoptera, Plecoptera T&E Species Observed (list): None Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Livestock access, cow pasture Waterbody is: (check one)	Carex bromoides, Impat	iens capens	sis, Symphyotrici	hum laterifle	orum							
Aquatic Organisms Observed (list): Coleoptera, Plecoptera T&E Species Observed (list): None Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Livestock access, cow pasture Waterbody is: (check one)	Aquatic Habitats (ex: se	ubmerged or e	emerged aquatic v	egetation, ov	erhanging	banks/ro	ots, leaf pac	ks, large	submerged wood	d, riffles,	deep pool	s):
Coleoptera, Plecoptera T&E Species Observed (list): None Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Livestock access, cow pasture Waterbody is: (check one)			•	s, pools								
T&E Species Observed (list): None Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Livestock access, cow pasture Waterbody is: (check one)	Aquatic Organisms Ob	served (list	():									
None Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Livestock access, cow pasture Waterbody is: (check one)	Coleoptera, Plecoptera											
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Livestock access, cow pasture Waterbody is: (check one)	-	l (list):										
Livestock access, cow pasture Waterbody is: (check one)												
(check one) Stream Quality ^a : □ Artificial, man-made □ Manipulated			nanure in waterboo	iy, waste disc	cnarge pipe	es):						
Stream Quality *:		⊠ N2	ıtural	☐ Artificia	al. man-m	ade	☐ Manin	ulated				
(check one) ⊠ High □ Moderate □ Low							□ Low					

SASV003p

^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

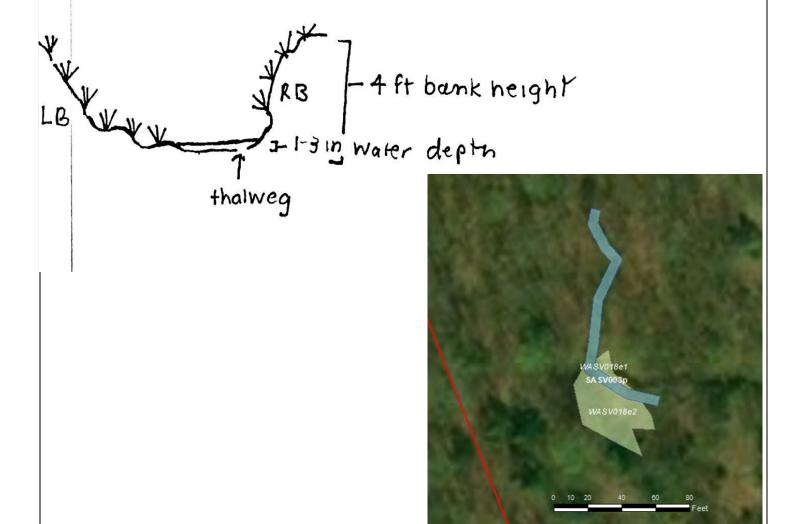
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Perennial stream within wooded portion of cow pasture. Stream shows signs of erosion and compaction from cow use, but no signs of heavy use. No signs of manure in or around stream. Flows northwest off-site.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Linear Waterbody Point Photographs Line 5 Wetland Delineation September 21, 2019, Page 1 of 2



Photograph 1: SASV003p, North, Downstream



Photograph 2: SASV003p, South, Upstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 21, 2019, Page 2 of 2



Photograph 3: SASV003p, East, Across Stream

Survey Descriptio	n									
Project Name:		Waterbo	dy Name:				W	aterbody ID:		Date:
Line 5		Unnamed	d tributary to	o Silver C	reek		SA	ASV001p		9/19/2019
State:	County:		Con	npany:			Crew N	Member Initials	: Photo	s:
Wisconsin	Ashland		VHE	3			CS, CC		3 (US,	DS, CS)
Tract Number(s):			Nea	rest Mile	post			Associated W	etland ID(s):	
WI-AS-189.000			N/A	– Access	Road			WASV006e, W	/ASV007e	
Survey Type: (check one)	□ Cen	nterline	□Re-Route	е	⊠Ac	cess Road		□Other:		
Physical Attribute										
Stream Classification: (check one)	☐ Eph	nemeral	□Intermitte	ent	⊠Pe	rennial				
Waterbody Type:										
	River [⊠ Stream	☐ Ditch		Canal	☐ Othe	er:			
OHWM	OHWM Ir									
Width: _1_ft.	(check all th	асарріу)		Clear lin n bank	ie	□Shelvin	g	⊠Wrested vegetation	□Scou	ring ⊠Water staining
Height: 2 in.		Bent, matted, o	or missing	□Wra	ck line	□Litter ar debris	nd	⊠Abrupt plant community cha		haracteristic change
N/A□ Width of Waterbody - 1	on of W	idth of Waterb	ody - Too	of Slone	Width	of Waterbo	ndv - W	ater Edge to	Depth of Wa	ter:
Bank to Top of Bank:		Toe of Slope:		oi oiope	Water	Edge:	ou,	ator Lago to	(Approx.)	
_ <u>1_</u> ft.		_	<u>1_</u> ft.		N1/A 🗆		<u>1</u> ft.		N/A□	<u>3-6 in</u> .
Sinuosity:	w	later velocity:			N/A□ Bank l	neight			Bank slope	
(check one)		pprox.)			- Lunix	Right:			_	ıht:
□Straight		<u>0.</u>	<u>25_</u> fps			_	0.5 ft.			90 degrees
⊠Meanderii	ng N	/A□				Left:	0.5 ft.		L	eft: 90 degrees
Ouglitative Attribu										
Qualitative Attribu Water Appearance:	tes									
	No water	⊠Clear	□Turbid	□Sh on su	een ırface	□Sur sc	rface :um	□Algal mats	□Other:	
Substrate:	Bedrock	□ Boulder □	Cobble	⊠ Grav	el 🗆	Sand D	⊠ Silt/ c	lay 🛭 Organi	ic Other:	
(check all that apply) % of Substrate:	%	%	%	<u>5</u> %	_	%	<u>35</u> %	<u>60</u> %		, D
Width of Riparian Zone	: Vege	tative Layers:								
-		all that apply)		□ Trees	:	⊠ Sapl	lings/Sh	rubs:	⊠ Herbs	
_ <u>200_</u> ft. N/A□	Avg. (approx	DBH of Domin	ants:	<u>6</u> in.		_	<u>2</u> in.	-	in.	
Dominant Bank Vegeta	ation (list):									
Calamagrotis canadensi	is, Impatiens	capensis, Onoc	clea sensibi	ilis						
Aquatic Habitats (ex: su	ubmerged or er	merged aquatic ve	egetation, ove	erhanging	banks/ro	ots, leaf pac	ks, large	submerged wood	d, riffles, deep p	ools):
Overhanging banks/root	s, leaf packs,	, riffles								
Aquatic Organisms Ob	served (list):									
Coleoptera, Diptera										
T&E Species Observed	l (list):									
N/A										
Disturbances (ex: livesto Culverted under access in the control of		anure in waterbod	y, waste disc	cnarge pipe	es):					
Waterbody is:										
(check one)	☐ Nati	ural	☐ Artificia	al, man-m	ade	⊠ Manipu	ulated			
Stream Quality ^a : (check one)	☐ High	h	⊠ Modera	ate		□ Low				

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

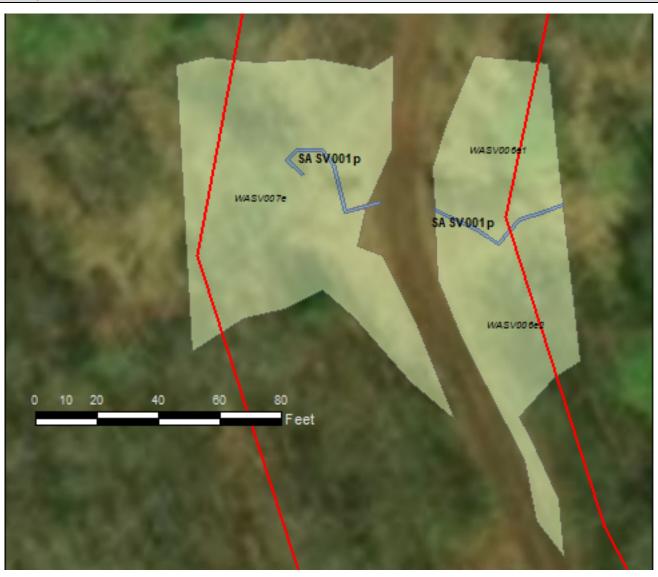
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream is culverted under access road for about 10ft with a 16in diameter pipe. Floodplain wetlands WASV006e and WASV007e connected to stream. Bed and bank are less defined in seepy eastern portions; stream goes subterranean on western half near edge of study area. Culvert is too small to support stormwater events.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Linear Waterbody Point Photographs Line 5 Wetland Delineation September 19, 2019, Page 1 of 2



Photograph 1: SASV001p, North, Across stream



Photograph 2: SASV001p, West, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 19, 2019, Page 2 of 2



Photograph 3: SASV001p, East, Upstream

Survey Descriptio	n										
Project Name:		Waterbo	dy Name:				W	aterbody ID:			Date:
Line 5		Unname	d tributary to	Silver C	reek		S	ASV005i			9/23/2019
State:	County:		Com	pany:			Crew I	Member Initials	i: F	Photos:	
Wisconsin	Ashland		VHB				CS, CC		3	3 (US, D	S, CS)
Tract Number(s):			Near	est Mile	post			Associated W	etland	ID(s):	
WI-AS-190.000			21. 5	i				WASV019			
Survey Type: (check one)	⊠ Cen	terline	□Re-Route		□Ac	cess Road		□Other:			
Physical Attribute	S										
Stream Classification: (check one)	□ Eph	emeral	⊠Intermitter	nt	□Pe	erennial					
Waterbody Type:											
	□River □	⊠ Stream	☐ Ditch		Canal	☐ Othe	er:				
OHWM	OHWM In										
Width: <u>4</u> ft.	(check all tha	at appiy)		Clear lir bank	ie	□Shelvin	g	□Wrested vegetation		Scouring	g □Water staining
Height: 0.5 in.		Bent, matted, o	or missing	□Wra	ck line	□Litter ar debris	nd	□ Abrupt plant community cha		Soil cha	racteristic change
N/A□ Width of Waterbody - □	Top of Wi	idth of Waterb	ody - Toe o	f Slone	Width	of Waterb	odv - W	later Edge to	Depth (of Water	•
Bank to Top of Bank:		Toe of Slope:		i Giope	Water		ou,	ato. Lago to	(Approx.)	o. maio.	
_ <u>5</u> ft.		-	<u>4 f</u> t.				<u>3</u> ft.		N/A□		<u>2 in</u> .
Sinuosity:	w	ater velocity:			N/A□ Bank I	neight			Bank s	lone	
(check one)		pprox.)			Dankı	Right:			Dank 3	Right	
⊠Straight		_	fps			•	<u>1</u> ft.			•	90 degrees
□Meanderi	ng N/	/ A ⊠				Left:	1 ft.			Left	: 30 degrees
Occalling the Attalling											
Qualitative Attributer Appearance:	ites										
	□No water	□Clear	□Turbid	⊠Sh on st	een urface	□Sui so	face :um	□Algal mats	□Other	:	
Substrate:	Bedrock	☐ Boulder 🗵	Cobble		el 🗆	Sand [□ Silt/ c	clay □ Organi	с 🗆 (Other:	
(check all that apply) % of Substrate:	%	%	<u>50</u> %	<u>40</u> %		_%	%	_ <u>10_</u> %		%	
Width of Riparian Zone	. Vogo	tative Layers:									
Width of Riparian Zone		all that apply)			:	⊠ Sap	lings/Sh	nrubs:	⊠ Herb	os	
<u>150</u> ft. N/A□	Avg.	DBH of Domir	nants:	<u>6</u> in.			<u>2</u> in.	_	iı	n.	
Dominant Bank Vegeta	ation (list):										
Carex bromoides, Impai	iens capensis	s, Dryopteris in	termedia								
Aquatic Habitats (ex: s	ubmerged or en	nerged aquatic ve	egetation, ove	rhanging	banks/ro	ots, leaf pac	ks, large	submerged wood	l, riffles, d	deep pool	s):
Vegetation in stream, po	ools										
Aquatic Organisms Ob	served (list):										
None											
T&E Species Observed	l (list):										
None											
Disturbances (ex: livest	ock access, ma	nure in waterbod	ly, waste disch	narge pipe	es):						
Livestock access											
Waterbody is: (check one)	⊠ Natu	ural	☐ Artificial	, man-m	ade	☐ Manip	ulated				
Stream Quality ^a : (check one)	☐ High	— <u>—</u>		e		□ Low					

SASV005i

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

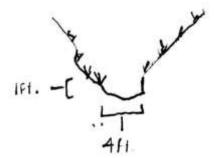
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

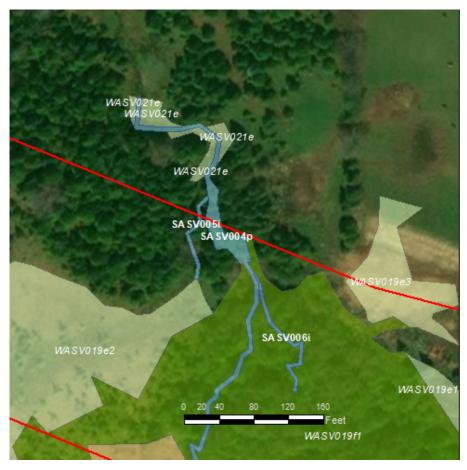
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Water is standing in pools, but not flowing at time of survey. Vegetation rooted in stream bed (*Impatiens capensis, Tsuga canadensis, Carex bromoides*). Sparse vegetation along banks. Clear disturbance associated with livestock access.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Linear Waterbody Point Photographs Line 5 Wetland Delineation September 23, 2019, Page 1 of 2



Photograph 1: SASV005i, South, Upstream



Photograph 2: SASV005i, North, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 23, 2019, Page 2 of 2



Photograph 3: SASV005i, West, Across Stream

Survey Description	n										
Project Name:		Waterbo	dy Name:				W	aterbody ID:		D	ate:
Line 5		Unnamed	Unnamed tributary to Silver Creek					ASV004p		9/	/21/2019
State:	County:		Con	npany:			Crew I	Member Initials	: Pl	notos:	
Wisconsin	Ashland		VHB				CS, CC		3	(US, DS	, CS)
Tract Number(s):			Nea	rest Mile	post			Associated W	etland ID)(s):	
WI-AS-190.000, WI-AS-	190.002		21. 5	5				WASV019, WA	ASV021		
Survey Type: (check one)	⊠ Cen	terline	□Re-Route	!	□Ac	cess Road		□Other:			
Physical Attributes	s										
Stream Classification: (check one)	□ Eph	emeral	□Intermitte	nt	⊠Pe	erennial					
Waterbody Type:											
	River [⊠ Stream	☐ Ditch		Canal	□ Othe	er:				
OHWM	OHWM In										
Width: _ <u>5</u> ft.	(check all the	аt арріу)		Clear lir bank	ie	□Shelvin	g	□Wrested vegetation	□S	couring	□Water staining
Height: 3 in.		Bent, matted, o	or missing	□Wra	ck line	□Litter ar	nd	☐ Abrupt plant community cha		oil chara	acteristic change
N/A 🗆		-			har: 1.1			· ·	<u> </u>		
Width of Waterbody - T Bank to Top of Bank:		idth of Waterb Toe of Slope:		of Slope	Width		ody - W	ater Edge to	Depth of (Approx.)	water:	
<u>5.5</u> ft.		-	<u>3 f</u> t.				<u>2</u> ft.		N/A□	_	<u>3-4 in</u> .
Sinuosity:	w	ater velocity:			N/A□ Bank I	height			Bank slo	ne	
(check one)		pprox.)			Dankı	Right:			Dank Sic	Right:	
□Straight			<u>1_fps</u>			•	<u>3</u> ft.			•	90 degrees
⊠Meanderir	ng N/	/A□				Left:	<u>3</u> ft.			Left:	70 degrees
Ovelitative Attribu											
Qualitative Attribu Water Appearance:	tes										
	No water	⊠Clear	□Turbid	□Sh on st	een ırface	□Sur sc	face um	□Algal mats	□Other:		
Substrate:	Bedrock [□ Boulder ⊠	Cobble		el 🗆	☐ Sand ☐ S	Silt/ clay	√ ⊠ Organic □	Other:		
(check all that apply) % of Substrate:	%	%	<u>60</u> %	<u>30</u> %	_	%	%	<u>10</u> % _	%		
Width of Riparian Zone	. Vege	tative Layers:									
		all that apply)		□ Trees	:	⊠ Sapl	lings/Sh	nrubs:	⊠ Herbs	;	
<u>>500</u> ft. N/A□	Avg. (approx	DBH of Domin	ants:	<u>10</u> in.		-	<u>2</u> in.	-	in.		
Dominant Bank Vegeta	tion (list):										
Thuja occidentalis, Care.	x bromoides										
Aquatic Habitats (ex: su	ıbmerged or en	nerged aquatic ve	egetation, ove	rhanging	banks/ro	ots, leaf pac	ks, large	submerged wood	l, riffles, de	ep pools)	:
Riffles, pools, overhanging	ng vegetation	n, large submer	ged wood								
Aquatic Organisms Ob	served (list):										
None											
T&E Species Observed	(list):										
None											
Disturbances (ex: livesto	ock access, ma	nure in waterbod	y, waste discl	harge pipe	es):						
Livestock access											
Waterbody is: (check one)	⊠ Natu	ural	☐ Artificial	l, man-m	ade	☐ Manipu	ulated				
Stream Quality ^a : (check one)	☐ High	— <u>—</u>	⊠ Modera	te		□ Low					

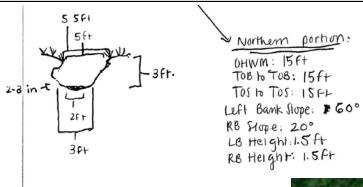
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

SAV004p originates off-site. In the upstream (southern) portion, the stream is flowing but goes subterranean for brief sections throughout. The ground water-driven, seepy wetland (WASV019) creates several braided channels within the wetland itself that do not have consistent enough bed or bank to map. The stream crosses into PEM cowpasture to the north and transitions into a wider, more cobble-boulder feature. SASV005i and SASV006i both connect to this stream on the north end of the study area. WASV021 is a floodplain to the stream.





Linear Waterbody Point Photographs Line 5 Wetland Delineation September 21, 2019, Page 1 of 2



Photograph 1: SASV004p, South, Upstream



Photograph 2: SASV004p, North, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 21, 2019, Page 2 of 2



Photograph 3: SASV004p, East, Across Stream

Linear Waterbody Data Sheet

Survey Description	1											
Project Name:	Water			erbody Name:				Waterbody ID:			Date:	
Line 5		Unnamed tributary to Silver Creek					SA	ASV006i			9/23/2019	
State:	County: Company:			npany:		Crew Member Initials			S:	Photos:		
Wisconsin	Ashland			VHB CS, CC				3 (US,			S, CS)	
Tract Number(s):		Nea	rest Mile	post			Associated Wetland ID(s):					
WI-AS-190.000, WI-AS-1		21.	5				WASV019					
Survey Type: (check one)	□ Cente	erline I	□Re-Route	е	□Ac	cess Road		□Other:				
Physical Attributes	3											
Stream Classification: (check one)	☐ Ephei	meral	⊠Intermitte	ent	□Pe	rennial						
14/ / 1 1 7												
Waterbody Type: (check one)	River 🛛	Stream	□ Ditch		Canal	☐ Othe	er:					
OHWM	OHWM Inc											
Width: <u>8</u> ft.	(check all that	apply)		☐ Clear line on bank		e □Shelving		□Wrested vegetation		Scouring	g □Water staining	
Height: _1 in.		Bent, matted, o	or missing	□Wra	ck line	□Litter and	nd	☐ Abrupt plant community cha		∃Soil cha	racteristic change	
N/A 🗆								•				
Width of Waterbody - T Bank to Top of Bank:		dth of Waterb Γοe of Slope:	ody - Toe	of Slope	Width	of Waterb	ody - W	ater Edge to	(Approx.)	of Water	·:	
<u>8.5</u> ft.		_	<u>4</u> ft.		N/A□	_	<u>3.5</u> ft.		N/A□		_4 in.	
Sinuosity:	Wa	ter velocity:			Bank h	neight			Bank	slope		
(check one)		prox.)				Right:				Right	:	
□Straight		<u>0.25</u> fps			_ <u>1_ft</u> .						90 degrees	
⊠Meanderir	ıg N/A	Λ□				Left:	<u>1_</u> ft.			Left	:: _ <u>30_</u> degrees	
Qualitative Attribu	tos										-	
Water Appearance:	162											
	No water	⊠Clear	□Turbid	□Sh on su	een ırface	□Sui sc	rface cum	□Algal mats	□Othe	r:		
Substrate:	Bedrock \square	Boulder	Cobble	☐ Grave	el 🗆	Sand	⊠ Silt/ c	lay 🛭 Organ	ic 🗆	Other:		
(check all that apply) % of Substrate:	% _	%	%	%		%	<u>20</u> %	<u>80</u> %		%		
Width of Riparian Zone	· Vogota	ative Layers:										
width of Riparian Zone		If that apply)		⊠ Trees		⊠ Sap	lings/Sh	rubs:	⊠ Her	bs		
<u><500_</u> ft.							in.			in.		
Dominant Bank Vegeta	tion (list):											
Impatiens capensis, Thu	ia occidentalis	, Onoclea sen	sibilis									
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools):												
Overhanging banks, larg	e submerged	wood, pools										
Aquatic Organisms Ob	served (list):											
None												
T&E Species Observed	(list):											
None												
Disturbances (ex: livesto	ck access, man	ure in waterbody	y, waste disc	charge pipe	es):							
Livestock access												
Waterbody is: (check one)	⊠ Natur	al	☐ Artificia	al, man-m	ade	☐ Manip	ulated					
Stream Quality ^a : (check one)	☐ High		⊠ Modera	ate		□ Low						

SASV006i

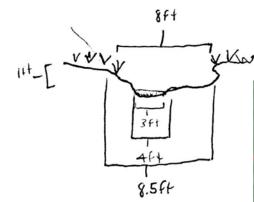
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

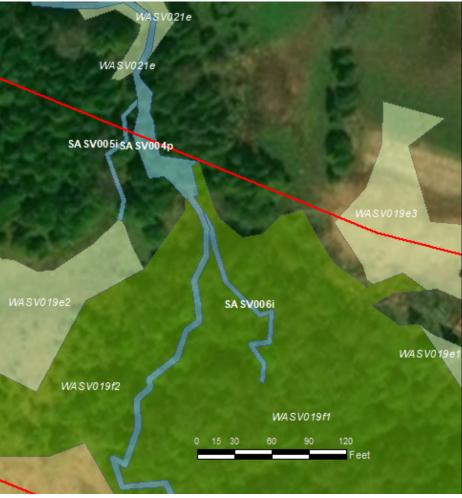
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Part of a large system of braided channels within PFO seep wetland WASV019. Many ephemeral-like channels present throughout and mapped as part of wetland. Low-flow channel connects to SASV004p at PFO/PEM break.





Linear Waterbody Point Photographs Line 5 Wetland Delineation September 23, 2019, Page 1 of 2



Photograph 1: SASV006i, South, Upstream



Photograph 2: SASV006i, North, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 23, 2019, Page 2 of 2



Photograph 3: SASV006i, West, Across Stream

APPENDIX F

Waterbody Data Sheets
Part 13 of 24

Linear Waterbody Data Sheet

Survey Descriptio	n								
Project Name:		Waterbody Na	me:		W	aterbody ID:	Date:		
Line 5		Unnamed tribut	tary to Krause	Creek	SA	ASV007i		9/23/2019	
State:	County:	•	Company: Cre			Member Initials	: Photos		
Wisconsin	Ashland		VHB CS,				3 (US, [OS, CS)	
Tract Number(s):	Number(s):			epost		Associated Wetland ID(s):			
WI-AS-194.000			21. 9			WASV023			
Survey Type: (check one)		ne □Re-	Route	□Access Road		□Other:			
Physical Attribute	S								
Stream Classification: (check one)	☐ Epheme	eral ⊠Inte	rmittent	□Perennial					
Waterbody Type:									
	River ⊠ St	tream 🗆 Di	tch 🗆 (Canal ☐ Othe	er:				
OHWM	OHWM Indication		Class lis		_		⊠ C i -		
Width: 4_ft.	(chock all that app	ny)	☐ Clear lir on bank	ne ⊠Shelvin	g	□Wrested vegetation	⊠Scourir	ng □Water staining	
Height: 1 in. N/A□	⊠Ben vegeta	t, matted, or miss ation	sing □Wra	ck line □Litter aı debris	nd	☐ Abrupt plant community cha		aracteristic change	
Width of Waterbody - 1 Bank to Top of Bank:		of Waterbody -	Toe of Slope	Width of Waterb	ody - W		Depth of Wate	er:	
	10 106	·		Water Luge.			(· /-/- · -···)	4 :	
<u>8</u> ft.		<u>4</u> ft.		N/A□	<u>4</u> ft.		N/A□	<u>4 in</u> .	
Sinuosity: (check one)	Water (Approx	velocity:		Bank height			Bank slope		
Straight	(Αρριολ			Right:	4 ft.		Righ	Right: 80 degrees	
		fps		Left:			Le	Left:	
⊠Meanderi	ng N/A⊠				<u>4</u> ft.			degrees	
Qualitative Attribu	ites								
Water Appearance: (check one)	[□] No water ⊠	lClear □Turb			rface cum	□Algal [mats	□Other:		
Substrate:	Bedrock □ Bo	oulder ⊠ Cobb	ole ⊠ Grav	el 🗵 Sand [□ Silt/ c	lay Organic	c		
(check all that apply) % of Substrate:	%	% <u>40</u> %	% <u>50</u> %	% <u>10</u> %	%	%	%		
Width of Riparian Zone	e: Vegetativ	ve Lavers:							
-	(check all the	at apply)		: ⊠ Sap	lings/Sh	rubs:			
<u>200_</u> ft. N/A□	Avg. DBI (approx.)	I of Dominants:	<u> </u>	-	<u>2</u> in.	-	in.		
Dominant Bank Vegeta	ntion (list):								
Impatiens capensis, Tilia	a americana, Pha	laris arundinacea	1						
Aquatic Habitats (ex: s	ubmerged or emerg	ed aquatic vegetation	on, overhanging	banks/roots, leaf pag	cks, large	submerged wood	I, riffles, deep		
pools): Vegetation rooted in stream bed, overhanging banks, pools									
Aquatic Organisms Observed (list):									
Green frog									
T&E Species Observed	l (list):								
None									
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):									
Signs of past sedimentat	ion from adjacent	agricultural field.							
Waterbody is: (check one)	Natural		tificial, man-m	ade 🗆 Manip	ulated				
Stream Quality ^a : (check one)	☐ High	⊠ M	oderate	☐ Low					

SASV007i

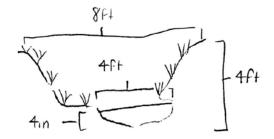
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

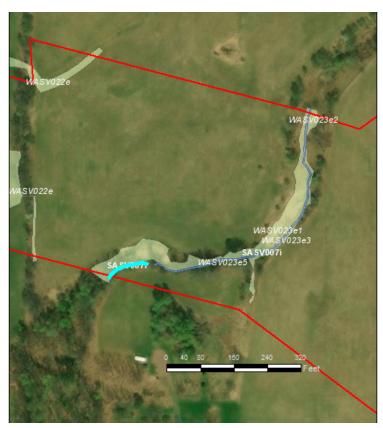
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Intermittent stream with pockets of standing water in larger pools. Stream crosses underneath access road. There are signs of significant sedimentation in some parts of the stream as a result of past agricultural land use.





Linear Waterbody Point Photographs Line 5 Wetland Delineation September 23, 2019, Page 1 of 2



Photograph 1: SASV007i, West, Upstream



Photograph 2: SASV007i, East, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 23, 2019, Page 2 of 2



Photograph 3: SASV007i, South, Across Stream

Linear Waterbody Data Sheet

Survey Description												
Project Name:				Waterbody Name:				aterbody ID:		Date:		
Line 5		Unname	ed tributary to Krause Creek				S/	SASV020p			10/5/2019	
State:	County:		Company: Crev					lember Initials	: Р	hotos:		
Wisconsin	Ashland		VHB DC				DCR, (R, CDC 3 (US,			S, CS)	
Tract Number(s):		Neares	t Mile	post			Associated W	etland I	D(s):			
WI-AS-197.000			22.9					WASV062				
Survey Type: (check one)	⊠ Cen	iterline	□Re-Route		□Ac	cess Road		□Other:				
Physical Attribute	s											
Stream Classification: (check one)		emeral I	□Intermittent		⊠Pe	rennial						
Waterbody Type:												
	River	⊠ Stream	☐ Ditch		anal	☐ Othe	er:					
OHWM	OHWM Ir											
Width: 6ft.	(check all th	at apply)	⊠ Cle on ba	ear lin ank	е	□Shelvin	g	□Wrested vegetation		Scouring	g □Water staining	
Height:1_ft.		Bent, matted, o	r missing [□Wrac	k line	□Litter ar debris	nd	□Abrupt plant community cha		Soil cha	racteristic change	
N/A□ Width of Waterbody - T	on of ha	idth of Waterb	adv. Taa af C	21	\Midth	of Waterby	adv M	lator Edga to	Depth o	f Mata		
Bank to Top of Bank:		Toe of Slope:	ody - Toe of S		Water		ouy - w	ater Euge to	(Approx.)	n water	•	
<u>8</u> ft.		_	<u>6</u> ft.		NI/A 🗆		<u>6</u> ft.		N/A□		<u>4-6 in</u> .	
Sinuosity:	w	ater velocity:			N/A□ Bank h	neight			Bank sl	one		
(check one)		pprox.)				Right:				Right	:	
□Straight ⊠Meandering			<u>2</u> fps				<u>3</u> ft.				90 degrees	
		/A□]			Left:	<u>4</u> ft.	L		Left	.eπ: 70_degrees	
Qualitative Attribu	tes											
Water Appearance:												
(check one)	No water	⊠Clear	□Turbid	□She on su		□Sur sc	face :um	□Algal mats	□Other:			
	Bedrock	□ Boulder ⊠	Cobble 🛚 🗵	Grave	el 🗵	Sand	⊠ Silt/ c	lay 🗆 Organi	с 🗆 С	Other:		
(check all that apply) % of Substrate:	_%	%	<u>30</u> %	<u>50</u> %	_	<u>10_</u> %	10	<u></u> %		%		
Width of Riparian Zone	. Vene	tative Layers:										
Width of Riparian Zone		all that apply)	\boxtimes .	Trees:		⊠ Sapl	lings/Sh	rubs:		S		
>500ft. Avg. DB N/A□ (approx.)			H of Dominants: 4 in.				<u>1</u> in.	<u>N/A</u> in.				
Dominant Bank Vegeta		<u>′</u>										
Fraxinus nigra, Betula alleghaniensis, Athyrium filix-femina												
Aquatic Habitats (ex: su	ubmerged or er	merged aquatic ve	getation, overha	anging b	oanks/ro	ots, leaf pac	ks, large	submerged wood	, riffles, d	eep pool	s):	
undercut banks, riffles, p	oools											
Aquatic Organisms Ob	served (list):											
None												
T&E Species Observed	l (list):											
None												
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):												
Horses have access to s	mall portion o	f stream in past	ure.									
Waterbody is: (check one)	⊠ Nati	ural	☐ Artificial, m	nan-ma	ade	☐ Manipu	ulated					
Stream Quality ^a : (check one)	⊠ High	h	☐ Moderate			□ Low						

Waterbody ID: SASV020p

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream originates off-site and dissipates into PEM portion of WASV062, which is located within a horse pasture.

